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WHEAT CULTURE IN NEW ENGLAND.

Much has been written, first and last, on the practicability and profit of growing wheat in New England, and particularly in Massachusetts. At this time, the Rev. J. A. Nash, of that State, is discussing the subject in the columns of the *Amherst Express*, in which we find several interesting statements, but none of them entirely satisfactory. They all fail to inform the reader of the value of the elements of fertility removed from the soil in producing a good crop of this grain. The following account, taken from the *Transactions of the Hampden Agricultural Society*, is instructive, and doubtless reliable, so far as it goes:

"Horace Smith's Statement.—The crop of wheat which I offer for premium, was raised on seven and a half acres of land; the soil an alluvial sandy loam. The land was well prepared and planted with corn in the spring of 1850, and harvested an excellent crop, which was cut up and carted from the ground by the middle of September. We then commenced for the present crop, by dragging the land, (to level the corn hills,) which prepared it for the plow. This immediately succeeded, and on the 25th of September the seed was sown at the rate of one bushel and a half per acre, which was harrowed in and the land rolled. In July, 1851, the wheat was harvested, has been threshed, cleaned, and sold for $1.10 per bushel.

The product was 236 bushels, amounting to	$259 60	
Eight tons straw, $6 per ton,	48 00	
		$307 60
Expenses for dragging the land for plow,	$2 20	
Plowing,	9 37	
Seed, 11¾ bushels, at $1.50 per bushel	16 87	
Sowing, harrowing, and rolling,	4 00	
Harvesting, at $1.25 per acre	9 37	
Threshing and cleaning,	9 00	
Cartage to market	3 00	
Land rent, $10 per acre,	75 00	
		$128 81
Net gain,		$178 79

Being a clear profit of twenty-three dollars and eighty-three cents per acre."

If a ton of wheat straw is worth six dollars, what is the value of a ton of good manure? What will it cost to give back to these seven and a half acres as much of vegetable mold, ammonia, soluble silica or flint, phosphoric and sulphuric acids, chlorine, potash, soda, lime, and magnesia, as was removed by tillage, irrespective of what the wheat plants consumed in growing, as well as all that the crop contained?

We hope that Mr. Nash will investigate this point, which for some reason has been too long overlooked by practical farmers. It is easy to understand how land made rich to yield a large crop of corn, may produce immediately after it an excellent and apparently very cheap crop of wheat. Boussingault describes land on which wheat had been successfully cultivated every year for two centuries, by the aid of manures. The annual overflow of the Nile is said to fertilize the soil sufficiently to yield annual crops of wheat, with as much certainty as inundated meadows on the Connecticut river yield

good crops of hay without any manure. The full and perfect renovation of the depauperated earth from which generous harvests have been gathered, is an object of the first importance with every considerate agriculturist. To neglect this professional duty shows that the first elements of wise and successful husbandry are either unknown or repudiated.

We believe that wheat-culture can be made profitable in Massachusetts, and the other New England States, to the extent of growing all that is needed for home consumption. In addition to all the manure that can be made on the farm, guano is now cheap enough, judging from its effects in producing wheat on the poor lands of Delaware, Maryland, and Virginia, to assist the wheat-growers north of Delaware quite as much as it does south of the Hudson river. There is no good reason why this highly concentrated fertilizer should be less valuable in grain-culture when used in Massachusetts, New Hampshire, Vermont, and Maine, than in New Jersey, Delaware, Maryland, Virginia, and North Carolina. Guano has more than doubled the value of thousands if not millions of acres in the States last named. Our New England friends will do well to experiment with this manure in growing wheat and corn more than they have hitherto done. Alone, it will fail to produce good wheat after the alkalies are measurably washed out of the soil by long tillage without adequate restitution; for 300 lbs. of guano does not supply as much potash as an acre of land parts with in bearing a fair crop of wheat. The remedy is to apply occasionally a few bushels of good ashes per acre. Where ashes are not to be had, clay that contains considerable potash, or greensand, may be used as a substitute, particularly on sandy, gravelly, and porous soils. Good virgin clay always abounds in the elements of fertility in a dormant or nascent state. These alimentary substances are brought out and rendered available by the mechanical and chemical effects of tillage. There are many advantages in resorting to fat clay to obtain the mineral food of plants. First, Clay costs nothing but the labor of subsoiling, or of hauling a short distance. Secondly, The light and heat of the sun, the frosts of winter, the oxygen and carbonic acid of the atmosphere, and the rains and dews that fall upon every square foot of land, are invaluable in developing the latent powers of rich clays; and they too cost nothing. As we have heretofore repeatedly stated, by slightly charring clay and adding a little caustic lime, whatever potash, soda, phosphoric and sulphuric acids it may contain in a before insoluble condition, will be brought out more speedily by this operation. The presence of lime in considerable quantity imparts to limestone lands, the world over, a higher reputation for wheat-culture than attaches to soils nearly destitute of calcareous matter. This is a fact of great significance, and one that our eastern and southern friends should carefully ponder. It is true that lime alone will not produce wheat, nor any other crop; but it is an indispensable element in all fertile land, and one that is lacking in more than a moiety of the cultivated farms in the United States.

No crop shows the skill of the farmer to better advantage than that of wheat. Let him plow deep and stir all the earth, harrow thoroughly, subdue all grass, bushes, briars, and weeds, where they exist, and the crop will command the full benefit of whatever strength the soil may naturally possess, so that if manured at all, a little may go far in augmenting the harvest. Much depends on giving fertilizers the best possible chance to aid in the growth of cultivated plants. On well tilled land manure does twice the good that is realized on badly cultivated fields; and yet, many farmers seem to believe that a ton of guano, or stable manure, should do all in producing grain, no matter how poorly the soil is cultivated.

Profit and loss in rural affairs are not studied so closely and accurately as they ought to be, and must be, to attain the highest success. Not until the raw materials of crops, as they exist in the surface of the earth, are entirely familiar to the husbandman, can he husband them with the best economy. To do this, he must know how to work up the things that make grain, grass, roots, tubers, fruits, and timber, with the least loss of his capital in the soil.

NATIONAL AGRICULTURAL CONVENTION AND SOCIETY.

A NATIONAL AGRICULTURAL CONVENTION assembled in the Lecture Room of the Smithsonian Institution at the federal metropolis, on the 24th of June last, in compliance with a call for that purpose signed by the Hon. MARSHALL P. WILDER, of Massachusetts, and the Presidents of a majority of the State Agricultural Societies in the Republic. The leading object of the Convention was to establish a National Agricultural Society; which object, we are happy to say, was fully accomplished, by calling into existence "The United States Agricultural Society."

Those who are seriously engaged in the great work of improving American tillage and husbandry in all the States and Territories which compose the Union, have long felt the want of some efficient national organization that would bring the friends of agriculture everywhere to act in concert for the attainment of a common purpose; but our country is so extensive, stretching from the Atlantic to the Pacific, and farmers have so much to do and look after at all times, and especially in the busy month of June, it was naturally feared that no object so public in its character as the formation of an agricultural society, avowedly to embrace the whole United States, could draw out a respectable delegation from a majority of them, to consult together in convention. But thanks to the agricultural press and the intelligence of the people, they are ready to sustain any well-considered plan, no matter how comprehensive, for the collection, increase, and diffusion of agricultural knowledge. The truth of this remark was demonstrated in the appearance of 152 delegates in Washington, many of whom had come several hundred miles at much personal inconvenience and expense, and for no other purpose than to attend the agricultural convention, and discharge what they regarded as a high public duty. Twenty-three States and Territories were represented.

The Convention was organized by calling Judge FREDERICK WATTS, President of the State Agricultural Society of Pennsylvania, temporarily to the chair, and appointing R. S. MERCER, of Maryland, and DANIEL LEE, of the District of Columbia, Secretaries.

On motion, a committee of seven was appointed to nominate permanent officers of the Convention; from which Mr. KING, of Rhode Island, (Editor of the Journal of Agriculture,) submitted the following nominations:

For President—MARSHALL P. WILDER, of Massachusetts.

For Vice Presidents—HENRY WAGER, of New York; FREDERICK WATTS, of Pennsylvania; CHAS. B. CALVERT, of Maryland; WM. F. HUNTER, of Ohio; GEORGE W. NESMITH, of New Hampshire; JOHN H. THROCKMORTON, of Virginia; H. K. BURGWYN, of North Carolina; T. J. RUSK, of Texas; JAMES DUANE DOTY, of Wisconsin.

For Secretaries—WILLIAM S. KING, of Rhode Island; B. P. JOHNSON, of New York; J. A. WARDER, of Ohio; J. D. B. DE BOW, of Louisiana.

The report having been unanimously accepted—

Mr. WILDER, amidst much applause, took the chair, and addressed the Convention as follows:

Gentlemen of the Convention:—I will not interrupt the proceedings of this body by any extended remarks by the chair; but I can not forbear to tender to you my heartfelt gratitude for the honor you have conferred upon me in selecting me to preside over your deliberations—an honor which is connected with a pursuit which has ever laid near my heart.

Permit me also to express my great gratification that there are present so many members representing the agricultural interest of this great Republic—some gentlemen coming from different and distant parts of the Union, at great personal sacrifice; but, whether from the north or the south, the east or the west, I extend to each of you the hand of fellowship, and I greet you as brothers in a common cause.

Gentlemen, we come here with no sinister motives; we have no political arguments to advance; we have no sectional or party purposes to promulgate: but we are here for more important purposes. We are here to advance an art coeval with the existence of the human race—an art which employs eighteen millions of our population, and four-fifths of all the capital in our fair land—an art which lies at the very foundation of all national and individual prosperity and wealth, the basis of com-

merce, of manufactures, and of industrial pursuits. We are an agricultural people; our habits, our dispositions, are rural. I rejoice that it is so, and I pray that it may ever continue to be so. Our country embraces every variety of soil, and is capable of producing most of the products of the torrid and temperate zones; and with a suitable application of science to this art, and a wise division of labor, with proper Governmental aid, there is no reason why American agriculture may not sustain competition with that of any other nation of the civilized globe.

The progress of agriculture, as you all know, gentlemen, has been slow in the United States; but a new era has now commenced. The old worn out systems of cultivation which have been followed by father and son, and from generation to generation, are now to be swept away, and science is to take its place in aid of honest industry. I rejoice, gentlemen, that we live at this day; I rejoice that the seed planted by the immortal WASHINGTON, and which has been watered by thousands of other eminent agriculturists, is now taking root, and that we live in our day to realize some of the proud results of their hopes.

Much of the progress which has been attained in our country is the result of individual enterprise, aided by the agricultural press; but the great motive power is confederated action—is associated effort. Gentlemen, we have met on this occasion to avail ourselves of this powerful impetus. At no period in the history of our country has there been such an assembly collected for the purpose of considering those objects for which we are brought together, and there has been no opportunity which is so favorable to the interests of the farmer.

Permit me again, gentlemen, to tender you my thanks for the distinction you have conferred upon me, and to say that in the course of our deliberations I may, with your permission, participate in your debates. [Applause.]

A committee composed of one from each State was appointed to draft a Constitution for a National Society, and prepare other business for the Convention. The following is a copy of the Constitution as reported by the business committee, which, with a few mere verbal amendments, is now the Constitution of the Society:

The undersigned, in order to improve the agriculture of the country, by attracting the attention, eliciting the views, and combining the efforts of that great class composing the agricultural community, and to secure the advantages of a better organization, and more extended usefulness among all State, County, and other agricultural societies, do hereby form ourselves into a society, and, for its government, adopt the following

CONSTITUTION.

Sec. 1. The name of this association shall be The United States Agricultural Society.

Sec. 2. MEMBERS—DUES.—The Society shall consist of all such persons as shall signify to any officer of the Society a wish to become a member, and who shall pay two dollars to the Treasurer of the Society, and a like sum annually hereafter; of delegates from the State agricultural societies in the States and Territories and District of Columbia, who may be appointed to attend the annual and other meetings of the Society, and who shall pay the like sum; and also of such honorary members as the Society may see fit to elect. Each member shall be entitled to receive a journal or publication of said Society, containing an account of its proceedings and such additional matter as shall be deemed worthy of publication, free from any expense except postage. Twenty-five dollars shall entitle one to the privileges of life membership, and exempt him from any annual taxation.

Sec. 3. OFFICERS.—The officers of this Society shall be a President, a Vice President from each State and Territory in the Union and from the District of Columbia, a Treasurer, a Corresponding Secretary, a Recording Secretary, and a Board of Agriculture, to consist of three members from each State, Territory, and the District of Columbia, to be appointed by the Executive Committees of the Societies of such States, Territories, &c., and where there are no such State Societies, to be appointed by the Executive Committee of this Society. The President of the Society shall be, *ex officio*, a member and President of this Board and of the Executive Committee.

DUTIES OF OFFICERS.—The *President* shall have a general superintendence of all the affairs of the Society. In case of his death or inability to discharge the functions of this office, the Board of Agriculture shall select a Vice President to act in his stead, and clothed with the same power, and shall perform the same duties as the President until the next annual election.

Vice Presidents.—It shall be their duty to advance all the objects of the association, in their several districts; to explain to agriculturists the character and objects of this association, and endeavor to obtain their co-operation and support; to watch the advance of practical agriculture, and to make known the results of the same, by report or otherwise, from year to year.

Board of Agriculture.—It shall be the duty of this Board to watch the interests of agriculture, as they are or may be affected by the legislation of the country, and to make such reports, memorials, and recommendations as may advance the cause of agriculture, and promote and diffuse agricultural knowledge; to examine, and when necessary, report upon the practicability of establishing agricultural schools, colleges, and model farms; to set forth the advantages of agricultural and geological surveys, and show the importance of the application of science to agriculture; to represent through their reports the relation of our agriculture to that of foreign countries, and to endeavor to

obtain information from such countries; to point out the advantage of introducing any new staples, seeds, and plants; to obtain, so far as practicable, annual statistical returns of the condition of agriculture throughout the different States—all which information shall be published by said Society, and form part of its transactions.

The *Executive Committee* shall transact the general business of the Society. It shall consist of five persons, who shall designate the time and place for exhibitions, regulate the expenditures, and take such supervisory charge of the business of the Society as may best promote its interests. This body shall elect its own chairman. Three members shall constitute a quorum.

The *Treasurer* shall keep an account of all moneys, and shall pay bills only after they have been audited by the Corresponding and Recording Secretaries, and a member of the Executive Committee, and countersigned by the President of the Society or the Chairman of the Executive Committee.

Corresponding Secretary.—The duty of this officer shall be to correspond with persons interested in agriculture; at each stated meeting he shall read such portions of his correspondence as may be of general interest; and it shall be his duty to carry out and advocate the views of the Board of Agriculture, in obtaining, arranging, and publishing any information they may desire to have laid before the agricultural community.

The *Recording Secretary* shall keep a record of the minutes of the Society, and of its Executive Committee.

Sec. 4. The annual meetings of this Society shall be held at the city of Washington, on the first Wednesday of February in each year, when all the officers of the Society for the ensuing year shall be elected by ballot. The Executive Committee, however, shall be competent, with the approbation of the Society, to appoint occasional meetings, to be held at other points. Fifteen members shall constitute a quorum for business.

Sec. 5. This Constitution may be altered at any annual meeting, by a vote of two-thirds of the members in attendance, provided not less than fifty be present.

The question of applying to Congress to establish a Bureau, or Department of Agriculture, was ably discussed in convention; but the friends of governmental aid in that direction unfortunately divided among themselves—some insisting that the great farming interest demands a cabinet minister far more than either the army, navy, or post office department; while others would go no further than Presidents TAYLOR and FILLMORE had recommended—*i. e.*, create a clerkship under the Secretary of the Interior, to be called an Agricultural Bureau. Both schemes were opposed by Gov. STEELE, of New Hampshire; Senator DOUGLAS, of Illinois; ROBINSON, of Indiana; THOMPSON, of Mississippi; and many others. The following resolution, offered by Mr. JOHN A. KING, of New York, was finally adopted:

Resolved, That this Convention respectfully request Congress to take action upon the subject of agriculture, and afford such efficient aid as in their wisdom shall be best calculated to advance the great interests of that branch of industry.

This resolution, insisting on the duty of Congress to do something that shall "afford efficient aid to agriculture," passed *unanimously*—leaving it to the wisdom of the law-making power to determine the way in which such assistance shall be rendered.

So soon as all State, County, and other agricultural societies, *unite their strength*, they will command both Congress and State Legislatures, in a way not to be resisted, to do all that ought to be done in behalf of the agricultural interest, which pays three-fourths of all National and State taxes. It is only by a wise co-operation that the friends of agriculture can do anything against the leaden rule of General Apathy. Let the 300 associations for the advancement of agriculture confederate under a federal head, having a National Board of Agriculture, as provided in the Constitution, and their success will be alike certain and brilliant. This will be a glorious achievement, and one worthy of a nation of farmers who own the soil which they cultivate. To say that one or two hundred thousand farmers in this free and happy country can not act harmoniously together to promote the honor and increase the profits of their noble calling, is to assail both their patriotism and their self-respect. Agriculturists love their profession, and are ready to combine their individual efforts to elevate it, until there shall be at least as many farmers in Congress as lawyers. Why not? The youth in every rural district in the United States greatly need good text-books on agricultural physiology,

chemistry, geology, botany, engineering, the study of soils, and other departments of agricultural science, which they never will get unless something more than mere talk is done for agricultural education. The time for action has arrived; and all State Societies and Boards of Agriculture should appoint at once the three members in each State, Territory, and the District of Columbia, who are to form the United States Board of Agriculture. Such a Board will carry out the idea of the illustrious farmer of Mount Vernon.

With the aid of Congress, which this Board can not fail to receive, the National Society will be able to give every member more than an equivalent for his two dollars yearly subscription to its funds. The Journal of the Society, and its facilities for obtaining and distributing valuable seeds, are advantages and objects of great importance. It has not merely a continent for the theatre of its operations, but the whole vegetable and animal kingdoms of the globe to select from. Government ships and officers, that visit all seas and lands, are at the service of the United States Agricultural Society; and this Society is no more than the servant of all local societies that see fit to avail themselves of its labors, either at home or abroad. Foreign ministers, charges, and consuls in other nations, the heads of departments, and members of Congress, will all render valuable aid, if properly approached. Let us prudently adapt ourselves to the circumstances with which we are surrounded, and use the means so clearly within our reach, to place the arts, the sciences, and the literature of rural affairs in this country, in advance of those of any other in the world.

SOURCE OF THE NUTRITIOUS PROPERTY OF VEGETATION.

The nourishing property of wheat, corn, and other grains, is owing to the gluten contained in them; and this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the aliment of the plant. Carbonic acid and water are the chief sources of *growth*. Nitrogen is the principal element constituting the nutritive quality. The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere, in its simple form, but, by combination with hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterward separated in the plant and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of most animal substances. In this way it is that the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which being digested in the plant, results in a separation of nitrogen, which enters in the tissues of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the rain and dew become impregnated with it, and it is thus administered to vegetables in small quantities. This may be sufficient for their existence and ordinary growth; but a greater supply of ammonia is necessary to some plants, on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased by a liberal supply of manures from which ammonia is more abundantly provided. These plants can therefore only be cultivated advantageously by a free application of manure, or otherwise an equivalent provision of ammonia in another form. Corn ordinarily, when raised in vegetable mold, contains nine and a half per cent. of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yielding it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water is considered to be injurious.—*New Eng. Farmer.*

A knowledge of the source of the nutritious properties of vegetables, can not fail to be interesting and valuable to every farmer. The above article is well calculated to throw light on the subject, which, though so very important, is but dimly understood. We must, however, differ with our contemporary in one respect. That the nutritious value of wheat, corn, oats, &c., is in proportion to the gluten or other nitrogenous substances they contain, we believe; and it is so natural to suppose that "by supplying

additional nitrogen in the aliment of the plant we should increase the *proportion of gluten* in the grain," that most people, and indeed many able chemists, have adopted the belief without sufficient evidence of its correctness. We know that wheat is greatly increased in quantity per acre by the application of ammonia in any available form — that in fact ammonia is the one special ingredient which a manure for wheat should contain. This being the case, it is not to be expected that wheat and corn, "proverbially characterized as yielding starchy seeds, and whose predominant peculiarity is to produce carbonaceous substances, would in their most perfect state of development be rich in starch rather than in gluten and other nitrogenous compounds." Mr. LAWES, who has perhaps experimented more on the requirements and composition of the wheat plant than any other living investigator, says on this point:

"My experiments do not give the slightest indication of an increase of nitrogenous element of wheat grain by the employment of ammoniacal manures. That the average produce of nitrogen in the crop bears a certain relation to the ammonia supplied in the manure, is very evident; but the per centage of nitrogen in the grain can not be increased by means of it. In some experiments, the quantity of ammonia supplied by the manures was from 60 to 70 lbs. per acre, and in some instances more; but the analyses give no evidence of an increased per centage of nitrogen by its supply, and the highest amount obtained in the series was from an experimental plot where no ammonia was supplied in the manure."

It is very evident that we should be very careful in coming to hasty conclusions on the requirements of plants, and the influence certain kinds of manure would have upon them, from a simple knowledge of the chemical composition of the seeds, &c., irrespective of their peculiar characteristics, and without due regard to vegetable physiology.

It is, too, not true that the greater amount of gluten or nitrogenous substance the plant contains, the more nitrogen will it be necessary to supply in the manure: for, of the leguminous plants, the clover seed contains 7 per cent. of nitrogen, and that of peas, beans, and tares, 5 per cent., while wheat contains on an average but 2 per cent. of nitrogen in dry matter; yet it is most clearly proved that wheat requires much more nitrogen for its production than either clover seed, peas, beans, or tares. The recent experiments of Messrs. WAY and THOMPSON, on the "absorptive powers of soils," throw a ray of light on this interesting subject, which will probably lead to more important elucidations. These gentlemen found, by a series of experiments, that the absorptive power of soil was owing to the double silicate of alumina and soda which it contained —that when sulphate or any other *soluble* salt of ammonia was added to the soil, a decomposition took place, the ammonia uniting with the silicic acid in the place of the soda, which unites with the sulphuric acid and is washed out, while the double silicate of alumina and ammonia is left in a nearly insoluble condition. We quote from Prof. WAY's lecture:

"But in order that they might fully understand this part of the subject, he must explain to them an idea which he had taken in reference to this double silicate of ammonia and alumina. He had already stated that water did not dissolve the whole salt, but that the silicate of alumina remained undissolved, while the silicate of ammonia was dissolved in small quantity. Now he had found that this solution of silicate of ammonia, when carefully evaporated, dried up on the sides of the dish into thin transparent scales, like very thin glass, and these scales were found upon examination to be silica; the ammonia having evaporated with the water, and leaving the silica as a transparent varnish on the dish. Was it not likely that this fact formed the true explanation of the manner in which silica was deposited on the straw of wheat? He thought it might be. Chemists had always had a difficulty in accounting for this deposition of silica on the straw of cereal plants by reference to the soluble silicates of potash and soda; and the solubility of silica in ammonia had not been before observed. By the easiest and simplest process a weak solution of silicate of ammonia, in passing through the plant, might leave its silica behind; and the probability of this explanation was increased by Mr. LAWES' observation of the loss of ammonia from the soil in the growth of corn crops. Mr. LAWES had found that for every pound of ammonia of which the nitrogen was fixed in the wheat, in the shape of aluminous constituents, other four pounds were lost to the soil in the growth of the crop —that is to say, that five pounds of ammonia were required to produce a quantity of wheat containing nitrogen equal to one pound of ammonia. This loss would at once be accounted for, and would inevitably result, if the deposition of the silica were due to the action to which he had referred."

Thus it would appear that instead of plants which contain the largest amount of nitrogen requiring the largest quantities of ammonia or nitrogen in the manure, it is more probable that plants require ammonia in proportion to the amount of silica they contain; so that nearly all the grasses — wheat, corn, oats, barley, &c. — would require much more nitrogen for their perfect development than the leguminosæ — clover, beans, peas, &c., — which, compared with the cereals, contain but little silica. And this conclusion is sustained not only by direct experiment, but by the successful practice of the best farmers in this country and Europe — clover, peas, beans, &c., being considered the best possible preparative for the wheat crop — better, in many cases, than the summer fallow; while the succession of cereals always, unless the soil is kept up by manure, produces exhaustion.

ENGLISH AND AMERICAN PLOWING.

In the cultivation of the soil, the first and most important operation is its thorough pulverization, loosening the soil to enable the roots of plants to penetrate and perform their functions, and admitting the atmospheric air, the presence of which is not only beneficial in disintegrating the minerals of the soil, but absolutely necessary to render all the food of plants fit for assimilation. The spade is perhaps the best and simplest implement to accomplish this object, but in extensive farming operations the slowness and expense of the process are sufficient to warrant the opinion that it will never, as has been thought by some, be generally adopted.

The plow is necessarily a much more complex implement, inasmuch as the labor of the horse is substituted for that of man. When we look at the rude and simple wooden plows with only one handle to guide them, which were used very generally a century ago, and which are in fact now used in the Hebrides and other countries in the old world, and compare them with one of our American plows, so neatly made and beautifully finished that it would be an ornament to a gentleman's drawing-room, we have room for a little gratulation, and are apt to imagine that now we have arrived at perfection in the art of plowing. Yet even now much difference of opinion exists as to what good plowing really is — some liking wide, flat furrows, and others narrow, lapped ones; and it is this disagreement of opinion that constitutes the difference of plowing in Great Britain and America.

The best Scotch and English farmers consider that the *depth* and *width* of furrow should bear a constant proportion — that the furrow should be rectilinear — and that, when raised, the exposed surfaces should be of equal breadth on either side the furrow. Any departure from this rule is considered a positive fault; and in deciding on the merits of different plowing, this is made one of the standard criteria. The most approved plowing in Scotland is a furrow seven inches deep by ten wide, with a lap of three inches, thus leaving seven inches on each side of the furrow. A furrow of this proportion is considered to be easier turned than any other, while more soil is exposed to the meliorating influence of the atmosphere; and when dragged down, the weeds and grass, or clover, &c., are better covered and rotted, while a much deeper and better bed of loose soil is prepared for the seed.

Theoretically, this is doubtless the best mode of plowing, and the nearer we approximate to it in practice, the better. American farmers, however, are not content to walk from one end of a field to the other, and only turn over nine or ten inches of sod; fourteen to twenty inches suit their go-a-head views much better. And so it is that we usually plow furrows which in Scotland or England a farmer would not allow us to turn if we would plow the land for nothing; — at least, so we have often been told by good English and Scotch plowmen. There is a reason for this: the comparatively cold

and sluggish climate of Scotland has not that decomposing and meliorating effect on the recently plowed soil as has the intensely cold and hot weather of America; and so it is that we can turn over for our summer-fallows furrows which in Great Britain would never be got to pieces in one twelve-month, whereas here they decompose and fall all to pieces when cross plowed, though there is often but six weeks between the first and second plowing. Nothing surprises old country farmers more than this. We have heard good English farmers say, after they had been in the country a short time, "I never would have believed that such great wide furrows would tumble to pieces so readily in such a short time." This is undoubtedly the case; and, indeed, if it were not so, such is the shortness of the plowing season in the northwestern and eastern States, we should find it very difficult, much more so even than at present, to get our land ready for the seed.

Yet, while we admit this, we would not argue in favor of wide furrows, unless a corresponding depth be observed. Thus, if we plow a furrow fourteen inches wide, it will be necessary to go ten inches deep, with a lap of four inches, to get the maximum of surface exposed to the atmosphere, and have the sides of the upturned furrow at an angle of 45 degrees from the bottom surface. In plowing clover ley for wheat immediately before sowing, as is generally done in Great Britain, we think the Scotch mode superior to any other. We should, however, like to hear our correspondents' views on this subject; for, as plowing lies at the foundation of all good farming, it is certainly important that as much light as possible should be thrown on the subject, and that it be done in the most scientific, economical, and expeditious manner possible.

In plowing a clover sod but once for wheat, after grazing it in summer or taking off a crop of hay, the great difficulty is in destroying the grass and weeds. We have now in our eye a field that was well manured and plowed in this way last fall, just previous to sowing. It looked exceedingly well the fore part of winter and in early spring; but the grass grew so thick and strong that the wheat was much injured, and turned out a light crop. In Norfolk, — which, though naturally one of the poorest sands, is cultivated better and yields heavier crops than any other county in England, — they use an iron roller about two and a half feet in diameter, and about two inches wide at the circumference, which is drawn between every furrow after it is turned over. It is drawn by one horse, which walks after the plow in the furrow, while the roller passes on the juncture of the two last turned furrows, pressing every bit of grass, weeds, &c., completely out of sight; so that when the land is dragged, it is some five or six inches below the surface. It does only one furrow at a time; so that it is almost as expensive as plowing, taking a horse and boy to do as much as a team will plow. Yet we believe it pays well, and is one of the cheapest and most effectual means of destroying grass and weeds in wheat. Those who have never seen it used can hardly imagine the benefit which attends its adoption.

FLAX-CULTURE AND FLAX COTTON.

There can be no doubt that the soil and climate of a greater part of the United States are well adapted to the growth of flax of good quality and quantity, and that we shall soon be extensive exporters instead of as now importers in linen and flax to the amount of nearly nine millions of dollars per annum.

The Chevalier Claussen process of preparing flax cotton is doubtless one of great value, and patent rights have been sold we believe for most of the eastern and western States, so that farmers who raise flax will be able to sell it to the manufacturer in the raw state, and realize much higher profits than when they had to incur the expense and labor of preparing the flax themselves.

It has hitherto been the practice with many flax-growers to raise it only for the seed, taking no account of the fibre, which is in reality the most valuable part, and it was thought incompatible to grow good flax and seed. This, however, we believe is a mistake; good seed and good flax have been often raised together, and will be much more generally when the value of flax is better understood. In pulling flax, it is not easy to seize upon the proper time, so as to make sure of good flax and seed. If pulled *too early*, much seed is lost; and if it be delayed only a short time *too long*, the quality of the fibre is greatly deteriorated. The seed must give way to the fibre. It is recommended to let the flax be fully out of flower, the seed balls well formed or set, and seed turning brown, and the flax stalks yellow beneath though green at the top; it is then in the best stage for pulling with most profit to the grower. The pulling should now be carried on as rapidly as possible. It is done by the puller taking hold of a small quantity near the top as it stands, and carefully pulling it up, keeping the root ends even. It is then tied into sheaves or bundles, and set up in the field like wheat. Rippling is the next process, and is done by a machine containing a row of upright teeth so adjusted as to take off the seed, leaving the fibre uninjured. The Flax Improvement Society of Ireland says that the rippling should take place simultaneously with the pulling—that the flax should not remain in the field the second day, but be rippled immediately and taken to the steeping place before it hardens.

At the annual meeting of the Tippecanoe County (Indiana) Agricultural Society, the principal subject of discussion was the culture of flax, when the Hon. H. L. Ellsworth, late Commissioner of Patents, stated that—

"A committee had been sent from Philadelphia to France, Holland, England, and Prussia, for the purpose of examining the modes of cultivation, best soil, etc., and that the committee had reported highly favorable as to the adaptation of our soil and climate for raising this important product. The company who sent this mission abroad possessed a heavy capital, which they have invested in the manufacture of the article. They offered to make a contract with him for $100,000 worth, and they offered for flax delivered in Philadelphia, equal to Russian, $250 per ton. Mr. E. stated that he had sent by mail for a sample of the quality, and intended to enter into the arrangement provided a similar kind could be raised upon the prairie lands. He had selected seven or eight different kinds of land, upon which he had sowed different kinds of seed, from one to two bushels to the acre, to test the yield of seed and lint. At the price named, the lint would be worth $40 per acre. There was a machine coming from Springfield for dressing flax. A man and boy with it work out one and a half tons of stems a day. There can be 14 bushels of seed raised to the acre. This will yield nett $6. He had no question but that flax was the best article to cultivate in this country, as a greater value could be got into a smaller compass than any other product our soil and climate could raise. If the oil should be manufactured here, the cake would furnish superior fattening food for cattle. It is now sold to export for that purpose.

"The flax cotton in its second process of preparation has a very strong resemblance to cotton, and is superior in many respects. It has a longer staple. The lint is hollow, cellular, like the human hair. In the chemical agencies employed to prepare it, soda is used to fill these cells. Then an application of a weak solution of sulphuric acid causes a contraction which blows it up. The hypochloride of magnesia is then used to finish it for spinning. Flax cotton thus prepared contains a felting quality, which cotton does not. While alkalies destroy high coloring in cotton, it does not in flax cotton. The latter can be made a very high color. If one-half is mixed with silk, it is almost impossible to tell it from pure silk. It makes fine bagging in a common cotton machine. A mowing machine will cut the crop. A yield of 10 bushels seed and 400 lbs. lint can be safely calculated to the acre. It can also be mixed with wool for winter clothing. Flax cotton bids fair to be an article of great export. Mr. E. had offered to raise 1000 acres for the Philadelphia company, if the quality would answer. He expected to see flax cotton sent from here the same as cotton from the south."

To Reduce Solid Feet to Bushels.—Multiply the number of solid feet by 45 and divide the product by 56; the quotient will be the number of bushels.

Reason.—As one bushel contains 2150$\frac{4}{5}$ inches, one solid foot is $\frac{4}{5}\frac{5}{6}$ of a bushel.

Example.—How many bushels in a crib or box 8 ft. long, 4 ft. wide, and 2 ft. deep? $8\times4\times2=64$, which multiplied by 45 and the product divided by 56, gives 51$\frac{3}{7}$; the number of bushels which the box contains. M. K.—*Bentonville, Ind.*

THICK AND THIN SOWING.

The proper quantity of seed to sow per acre is a matter of much importance in agriculture, and consequently much difference of opinion exists on the subject. In Great Britain the point of thick and thin sowing has perhaps been more discussed than with us; and after so much investigation, each system has its strenuous and perfectly satisfied advocates. Before the days of Davis, Mechi, Huxtable, and other new lights, the amount of seed sown in England was generally, of wheat, three bushels; barley, three and a half; and oats, four. These gentlemen, however, showed that by under-draining, subsoiling, and *high manuring*, a large crop of wheat might be obtained from *one peck* of seed per acre. This was considered a wonderful result, and the number of bushels of wheat that would be saved to the county by the adoption of their sowing system was calculated, and a great parade made of the result. But while it was true that a good crop could be obtained from a peck of seed per acre, if it all grew and did well, it was found that in a certain number of acres there was invariably some that did not do well, from the seed not germinating, winter-killing, &c., and that the loss sustained by such failures more than counter-balanced the profit by saving seed; and the conclusion arrived at was, that it is necessary to sow much thicker than the actual requirements of the plants demand, on purpose to insure a good crop in all cases; so that, as is usually the case, the "happy medium" is generally adopted, and two bushels of wheat per acre would be about the average quantity of seed sown in Great Britain. It is generally considered that from a peck to a half bushel less seed is required when drilled in, than when sown broadcast. In Canada, especially in the lower Province, much more seed is sown per acre, of wheat, barley, and oats, than with us; and indeed we have often thought our farmers are much too sparing of seed, especially of oats and barley. When wheat is drilled in, we consider that one and a half bushels per acre are sufficient if the soil is rich and the seed well put in; but when sown broadcast, we should always prefer two bushels, and in many instances two and a half bushels would be none too much. A less quantity of seed would often produce as good a crop, but we consider it best not to run the risk of losing half, or even a part of the crop, for the sake of an extra peck or two of seed per acre.

Some difference of opinion exists among farmers, as to whether rich or poor soils require the most seed. It is argued on the one hand, that if the soil is very fertile, the plant will grow much stronger and branch out considerably; and if there is too much seed sown, the plants will still branch out, and being too thick on the ground they will grow up fine, and the crop will be laid. Others say that if the soil is poor, or destitute of a sufficient amount of fertilizing matter, it is certainly bad policy to increase the number of plants to consume it — that a much wiser plan would be to have fewer plants, and let each of these have sufficient food and be perfectly developed, and not have a large number, none of which can be properly matured from lack of the necessary ingredients. This appears good reasoning, and is perhaps correct in the case assumed; but it is not the true point at issue. If the soil does not contain sufficient ingredients for a crop of wheat, it should not be sown at all; for it is very doubtful if, in such a case, the plants would thrive and do well, even though they were planted so far apart as to give them the required amount of ingredients it the soil.

The point to decide is, whether a soil that will produce a crop of wheat of twenty or twenty-five bushels per acre, requires more or less seed than one that will produce thirty-five or forty bushels per acre. In such a case, we decidedly think that the rich land would require the least seed, for the reason that it would grow so much stronger and bushier than on the comparatively poor soil.

We make these remarks this month, in the hope that some of our practical correspondents will favor us with their views and *experience*, in time for the next number.

Condensed Correspondence.

Large Hog.—I slaughtered, on the 9th of March, a hog *fifteen months old*, that weighed 530 lbs. Daniel Dawson.—*Beaver Co., Pa.*

Weight of Merino Lambs.—I have some good sized lambs; one of them at nine days old weighed 17¼ lbs., and is now (May 29,) two months old and weighs just 50 lbs. They are of the French Merino breed. Isaac M. Gillett.—*Clyde, Wayne Co., N. Y.*

Spanish Merino Sheep—Good Shearing.—I have a flock of 46 sheep, from which I cut 288 lbs. of good, clean washed wool, which is an average of 6¼ lbs. per fleece. Of these 46 sheep there are 29 ewes, all of which had lambs this spring; 9 yearling ewes; 7 yearling bucks; and 1 three years old buck, which cut 12¼ lbs. washed wool. Who can beat this in Genesee county. H. N. Wright. *Alexander, N. Y.*

To remove Garlic Taste in Butter.—A friend of mine who keeps a butter dairy says, to destroy the taste of garlic in the butter, when cows are pasturing where garlic grows, put into the pail as much pulverized saltpetre as will lay on a half-dime piece. Put it in before milking, each time the pail is emptied. He says the butter will not taste of garlic in the least. Jacob Howell.—*Germantown, Pa.*

Dropped Manure.—I see in your paper many articles respecting agricultural economy, that are interesting to the practical farmer. I thought I would add a little to its columns, if you think this worthy of a place therein. All manure that is dropped by cattle in fall and early winter in meadows, &c., should be beaten as soon as ripe for that purpose, or when it becomes thawed in winter by the warm days and rains. Beat it to pieces finely, so that the strength may soak into the ground by the next rain or thaw that may come; this will prevent its drying up. If it is let alone until spring, and then beaten, it will dry up and lose its value in a great degree. J. Potter.—*Scituate, R. I.*

Plaster on Wheat in the Fall.—As many farmers in this vicinity are putting plaster on their wheat in the fall instead of the spring, as heretofore, I have taken pains to inquire the reason of the change; and believing the information obtained important to wheat-growers generally, I take this method of giving it to the million, if you think proper to place it in your widely circulated journal.

Wheat, when plastered in the fall, obtains more root, and is thus enabled to stand the frosts better: it has the assistance of the plaster at a season of the year when it is almost impossible to go over the fields, and when it is most needed—namely, the very early spring: it gets its growth and ripens in good time; whereas, when applied in the spring, the wheat continues to grow late, sometimes to the injury of the crop—a superabundance of straw, falling down, rust, &c., &c., oftentimes being the consequence. A Subscriber.—*Niagara Co., N. Y.*

Gapes in Chickens.—I noticed in your June number an article on *Gapes in Chickens*—cause, cure, &c. Being a subscriber to your valuable paper, I thought I would give my views and experience on the same subject. The writer stated the cause of gapes in chickens to be exposure to cold, also giving what I do suppose to be a most excellent cure. In the first place I would observe the old adage—"An ounce of prevention is better than a pound of cure." I fully admit that cold, wet weather, and exposure to cold, are fruitful causes of gapes in young chickens, though in my opinion not the greatest cause. The cause that mainly produces gapes in young chickens, is unnatural food. By noticing the habits of animals in a state of nature, we learn how best to treat them when domesticated. This I give as a general rule, as I have never seen the fowls alluded to in a state of nature. Fowls of all kinds, when not domesticated, do not hatch their young until their proper food can be obtained; (worms, bugs, and insects are the natural food for chickens;) hence the importance of giving some food of a similar character.

I will now, as briefly as possible, state how to prevent the gapes. First, spread some wood ashe

on the ground, where water will not lay or run on, and thereon place your coop, made close on top and all around except the south side, which should be open to admit the sun and to allow the chickens to go out and in. Also have the coop so arranged that the hen can not get where you place the food for the chickens after they are two days old. Feed no raw corn meal dough, as is the common practice, but give a sufficient quantity of baked bread without salt, made of either corn or wheat meal, and at least one feed a day of curd made of sour milk, and every two or three days give some fresh meat—beef, veal, mutton, &c.—either raw or cooked, chopped up fine, and mixed with the curd; and as soon as the chickens are old enough to eat grain, give some wheat and small corn, (the hen can be fed principally on grain,) and a supply of water will insure your chickens from the gapes. CHESTER COUNTY.

IMPOVERISHING THE SOIL.—I have been particularly interested in reading the editorial remarks on the subject of the exhausting system of cultivation practiced by too many of the farmers of our country, and have wondered that the appeals to the reason, the interest, and the credit of their brethren, so often and so ably made by the editors of the *Farmer*, did not more frequently elicit a response from some of the thousands of your readers, who can not but be sensible of the importance of the subject; and though I am sensible that the space might be occupied by the production of an abler pen, yet, as few seem disposed to devote their time and talents to the subject, (if we may judge from the contributions to your columns,) I have concluded to offer a few remarks, which you are at liberty to dispose of as may seem to you best.

It is natural to suppose that a large proportion of the inhabitants of our country will, for the facilities of commerce, manufactures, &c., congregate in cities and villages, and a consequent demand will be made upon the farmer for the means of sustaining life and for the raw material for manufacturing, which are produced from, and consequently exhaust, the soil of its elements, particularly such as enter sparingly into its composition. These are circumstances over which we have no control, nor would we wish, were it in our power, to reverse them; the farmer is under the necessity of exchanging the products of the soil for those of the labor of the mechanic and manufacturer, though it may be at the expense and ultimate exhaustion of certain essential elements of his food and clothing. These are natural results, and Nature, ever right, is as uniformly kind; for although she has not furnished in inexhaustible quantities every essential element to every soil, yet she has placed all within our reach, though not always in such quantities, nor so easy of access, as to render us justifiable in wasting such as are already in our possession.

Now, to supply this necessary demand of the inhabitants of cities and villages, and at the same time preserve the primitive fertility of the soil, it appears to me quite necessary that we ascertain, first, what are the elements of our cultivated crops; second, which, if any, of those elements are deficient in our soil; and thirdly, whether the manure furnished by our animals contains the deficient materials in sufficient quantities. As to the first, we find that carbon, oxygen, and hydrogen greatly predominate in all vegetables, besides which the common earths, silica, alumina, and lime, enter into the composition of different plants in variable proportions, as also do soda, potash, and sulphuric, phosphoric, and some other acids, besides nitrogen, chlorine, and some other substances. Secondly, few soils are deficient in carbon; and if they are, the atmosphere is the great reservoir, from which perhaps vegetables absorb through their leaves all that is requisite, in the form of carbonic acid gas. The necessary quantity of oxygen and hydrogen is furnished from water. Silica and alumina are inexhaustible elements of almost every soil, whereas lime is deficient in some; but an abundant supply is found within a reasonable distance of every section of our country. Potash is rather an abundant material in most soils, but it enters so largely into the composition of most plants, that it is by no means inexhaustible; and if by a waste of the materials that furnish this indispensible the quantity should become deficient, we shall find that an artificial application will be made at an expense that will greatly diminish the profits of our business. Soda and chlorine may, if deficient, be furnished by an application of common salt, and sulphuric acid by that of plaster. But there is an element of the staff of life, a component part of corn and wheat, the substance of which our bones are mainly composed—to wit, the phosphate of lime—which, important as it is, is furnished naturally in the soil in quantities by no means inexhaustible; and until recently no important depositions of this mineral have been known to exist in our country; but, thanks to the scientific exploration of Prof. EMMONS, phosphate of lime has been found in large quantities somewhere near lake Champlain, how easy of access I know not, but with our present and increasing facilities for transportation, no doubt but the discovery is a great acquisition to the means of renovating our worn out lands. Nitro-

gen, which is an important element of some of our most important crops, is furnished from ammonia, which being very volatile, is disengaged from all putrifying animal and some vegetable substances, and having a strong affinity for water, is absorbed and returned to the earth by falling rain.

Thus it seems nature has provided means for replenishing the soil with the substances that growing crops are constantly drawing from it, either by her own process or by placing them within our reach; but the natural process is too slow for us of this railroad age, and that of purchasing and transporting them from a distance is what few will resort to as long as they can raise half a crop. It is true our farms may be kept up to their natural state of fertility by a judicious application of all the manure that could be made from the crops that are grown upon them; this is self-evident: and it is just as evident, that if the farmer sends to market two-thirds of the grain that he grows, and though he keeps stock enough to consume all the grass, hay, vegetables, and some grain, and disposes of the product of these in the form of beef, pork, wool, butter, &c., he is exhausting his soil of the elements of those articles, the production of which alone gives his farm its value.

A further and more censurable cause of the deterioration of the soil, consists in the waste of the fertilizers within our grasp—the manure of our own stock. How many farmers throw down the bars of their farm-yards, (for such seldom have gates,) and suffer their cattle to stroll at their leisure upon the highway, or along the lane that leads to their watering place, perhaps standing a great part of the day on the leeward side of a fence or hill that affords a better shelter than the bleak and dreary yard, purposely located on a hill so that the nasty leachings may run off, perhaps in the road or brook, and the yard be nice and dry. How many suffer their swine to run at large upon the highway what time they are not in some neighbor's cornfield or orchard. And thus, for six months in the year, what might be accumulating to fertilize the soil is scattered along the highway, to annoy and bedaub the feet of their wives and daughters. How many suffer their manure to be in their yards during the summer, exposed to the sun and rains, until by fermentation the ammonia and other volatile parts are wafted by the winds to fertilize other lands, and the soluble parts are either poisoning the water of the springs and brooks, or are enriching the earth far below what will ever be available.

Now, I would ask, how is it possible, under such a system of management, for the soil to retain its primitive fertility? And that this is not an over-wrought picture of the practice of quite too many of the farmers of our country, I think will be readily conceded by every farmer of common observation. But I am well aware that it is easier to find fault than it is to prescribe a remedy, and much easier to propose a remedy than to adopt it. My views with regard to the remedy are perfectly in accordance with those set forth by the editors of the *Farmer*, and perhaps I shall suggest nothing new when I say that, in my opinion, the first step towards a thorough reform should be a general diffusion of scientific information among the agriculturists of our country. The time has gone by when it was generally believed that no other learning was necessary for the farmer, than to read and write, and a sufficient knowledge of arithmetic to compute interest. It is now believed—it is now known by some, at least,—that our profession calls, or should call to its aid, more of the physical sciences than any other profession or business whatever. The earth that we cultivate is a great laboratory, where nature on a grand scale is, by chemical affinities, effecting the decomposition and new combination of the various organic and inorganic materials of which its surface is composed. The structure, position, and elements of the various strata of the earth's surface, have an important bearing upon its productiveness and the facilities for its proper cultivation. Why, then, should not the farmer acquaint himself with the sciences of chemistry and geology? And as his every day business is with nature in her several departments of the animal, vegetable, and mineral kingdoms, those of botany, physiology, and others, would naturally suggest themselves as applicable to his business. But to those who have not the leisure or a desire to acquire much of the knowledge refered to, as well as to those who have, I would say, and say it with emphasis, *husband the means that are within your reach; keep as much stock as is consistent with your interest.* Perhaps our markets are as well supplied with meats, butter, &c., as is profitable to the consumer or to the interest of the producer, at their present relative prices. If so, it should not be increased. But the quantity and quality of the manure may be vastly improved and increased by confining every animal to properly prescribed limits—by keeping the manure from the influences of the sun and rain—by preventing the waste of the liquid part, and strewing it frequently with plaster, or other substances calculated to fix and retain the gases. Swamp muck would answer a two-fold purpose by retaining the gases and augmenting the quantity. S. H.—*Plattekill, N. Y.*

FRENCH MERINO SHEEP.

BY GEO. CAMPBELL, OF WEST WESTMINSTER, VT.

I RECEIVED your communication, and was very glad to hear you express the determination not to publish anything unless on examination you thought it to be for the interests of your subscribers. I am of your mind, that the "agricultural papers have been too much used to advance the interests of speculators;" and I also agree with you that publishers should be more cautious, and not publish articles until they are satisfied that they contain nothing but *truth*. Anything I say in relation to the subject will not intentionally be misrepresented.

I send you a wood cut, engraved from a Daguerreotype, of a group of French sheep imported by WM. CHAMBERLAIN, Esq., of Red Hook, of your State, and myself, one year since.

The buck "Matchless," represented in the accompanying cut, is three years old, and weighed on the first of last March, 261 lbs. His fleece of one year's growth was 20 lbs. 12 oz., after losing a portion of it on the sea voyage. As to the shape, constitution, thickness and fineness of wool, this buck is considered by all who have examined him to be equal to any of the breed. He was my first choice in France, and was very much admired there, especially by some gentlemen from Australia, who owned large flocks of sheep, and were in France for the purpose of buying bucks to cross with their sheep, which originated in Germany. One of these gentlemen informed me that his number already reached 44,000, and that he intended to increase it until it reached 100,000. This man alone wanted 100 bucks for the service of his own sheep. He also informed me that others from his country were making preparations to travel in France and Spain, for the especial purpose of selecting sheep, with a view to increase the weight of fleece, and if possible to retain the fineness. So you see that not only we "Americans" have the "sheep fever," but that it is rapidly spreading over almost the whole world.

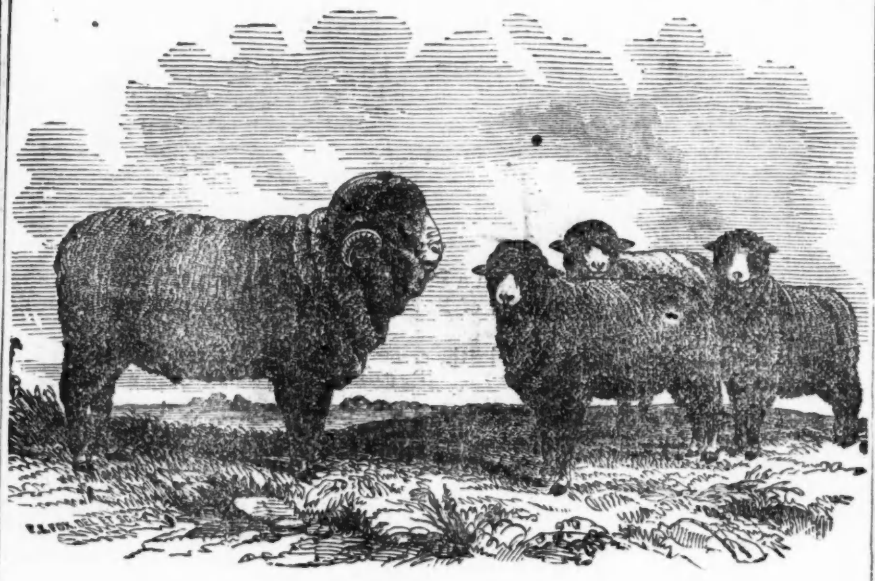
The live weight of the ewes here represented, is about 125 lbs. each. The average live weight of our whole flock of this breed, after having been shorn, did not vary much from 100 lbs. The average weight of fleece of the whole flock, 12 lbs. 8 oz. In selecting the sheep, I regarded a large size as a matter of secondary consideration, choosing those that would produce the most fine wool, according to the cost of keeping.

It is believed by many that the French Merinos require more than ordinary feed and attention, to keep them in good condition; but my experience with them, thus far, leads me to the conclusion that they will thrive well on ordinary keeping. They require nothing but a good pasture during the summer season. I gave mine nothing more. They are well adapted to our climate, and will bear exposure to storms equally as well as any sheep in the country. A portion of ours were turned off to pasture last June, and came to their winter quarters looking remarkably well. They had no grain of any description, nor were they sheltered from a single storm during the season.

Although the French sheep possess many desirable qualities, I should be unwilling to say that they are *greatly* superior to all other breeds in every particular, but believe that all experienced and impartial judges admit that they possess the following desirable points, viz:

1. A good vigorous constitution.
2. That they carry a heavy fleece of wool, of a fair grade; and
3. That they are gentle and docile in their dipositions, with an easy propensity to fatten.

It is my belief that the above qualities are better combined in the French sheep than in any others; but where wool alone is the object, I am of the opinion that there are other varieties of the Merino, of a less size, which will yield as much or more wool, and



GROUP OF FRENCH MERINO SHEEP.

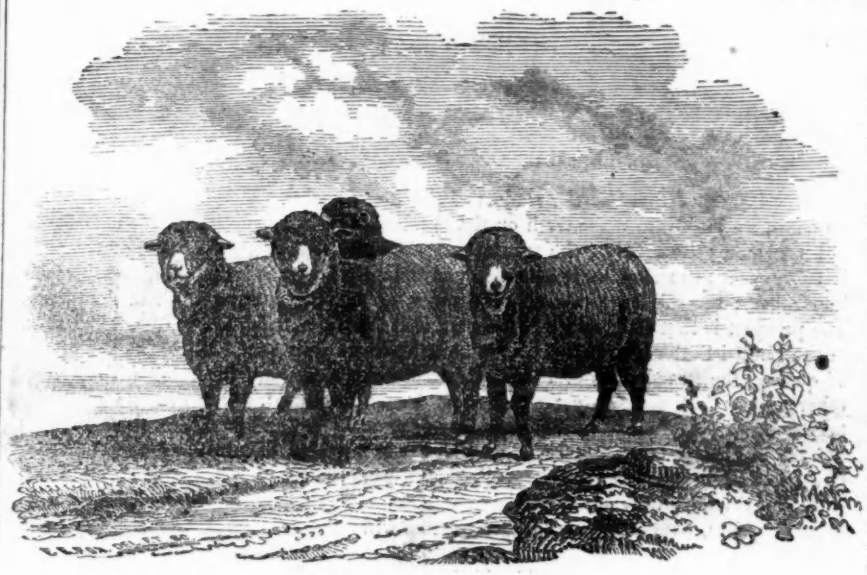
of a finer quality, in proportion to their size, and consequently the cost of keeping, than those under consideration.

There are, perhaps, some few improved flocks of the old Spanish stock, that will compare favorably with the French sheep, for the profitable production of wool; but the variety to which I have more particular reference is the Silesian Merino. I send you a cut of a group of Silesian Merino Ewes, which represent them precisely in the same position that they were taken in a daguerreotype view as they were standing in the barn-yard, and can not show all of their good qualities. Still, enough of them are shown so that one may judge of the character of the sheep.

The original stock of these sheep were from the Infantando flock, imported from Spain in 1811 by a Silesian gentleman who was in every way well qualified for a successful sheep-breeder, and who gave his personal attention to the business. They are about a medium size, well formed, and have every appearance of being hardy animals, often attaining a great age. One ewe of this flock lived to be twenty-one years old. The superiority of these sheep is in the excellence of the fleece, which is much finer, thicker, and evener than the common Merinos of this country. The quality will compare well with many Saxon flocks; and as to evenness and thickness of fleece, which holds out remarkably well on their belly and legs, they have no rivals. The length of staple is somewhat shorter than many other Merino sheep, still they produce a heavy fleece. Their wool is white, crimpy, and oily, which circulates freely to the outer ends, forming a dark surface, which is not only beneficial to the wool, but partially protects them from the storms.

I am confident these sheep will prove well for farmers living in sections where wool is the greatest object, and who prefer a *heavy and fine fleece* to a light one.

It is the prevailing opinion among wool-growers, that in proportion as the wool grows finer the fleece becomes lighter. But in this point I must differ from them. It has long been my opinion that as much fine wool can be produced from a given amount of keep-



GROUP OF SILESIAN MERINO EWES.

ing as that of a coarser grade, and my experience for the last few years has confirmed me in this belief. I am fully satisfied that one hundred or one thousand pounds of fine Merino wool can be grown at a less cost than an equal amount of an inferior quality.

Our Silesian bucks were used by several of my neighbors, and the cross with our common Merino ewes seems to be of a *high* nature. Many of the lambs are wrinkled all over their bodies, and are good sized and well shaped, without any hair or jar upon any part of their bodies, and no doubt will add to the weight as well as to the fineness of fleece. The weight of the ewe's fleeces last year was 7 lbs. 10 oz. unwashed, the growth of 10 months. The present season, in order to more thoroughly test their true value, they were well washed, first by well soaking them, then after letting them stand in the sun an hour or more, taking them into the water under a good spout and washing them until the dark outer ends of the wool became white and the water looked perfectly clear as it ran from the wool. After suckling lambs from January to May, and cleansing in the above manner, the average weight of the whole flock was 4 lbs. 5½ oz. Our bucks of this breed have not been sheared this year, but last year their fleeces weighed from 7½ to 10½ lbs. of ten months growth only.

There is of late considerable attention given to the subject of wool-growing, and I hope to hear from others engaged in the business through the pages of the *Farmer*. If farmers can be convinced that they can grow fine, soft wool as cheap as that of a coarse, harsh quality, they will surely enter into the business with a good deal of interest.

Cutting Oats.—Some of our contemporaries have been recommending farmers to cut their oats when quite green, stating that the straw is much better for fodder, and that the grain fills and yields quite as well as though left till quite ripe. We do not know but this is true to some extent, but are inclined to think that oats are the worst of all our grain crops to cut early, and we prefer to let them get so ripe that a few of the first formed grains will shell out, obtaining in this way a much heavier and fully matured grain.

Horticultural Department.

CONDUCTED BY P. BARRY.

NOTES ON STRAWBERRIES.

For the benefit of those of the readers of the *Farmer* who are desirous of information on fruits, we jot down, while fresh on the mind, the results of another year's experience.

First among the fruits of the season comes the *strawberry*. The culture of this fruit is every year attracting more attention; around Rochester it is assuming considerable importance; several large market plantations are already pouring in their abundance. The prospect is that Rochester will be soon, if it be not already, the best supplied town in the United States with this delicious fruit. We are quite confident that *now*, in point of quality, the strawberries of the Rochester markets compare favorably with those of other places; but there is yet great room for improvement. Our growers generally take good care of their plantations the first or second year, and produce splendid crops; but the third, and after, the beds get old, the ground all covered, and the fruit runs down to the miserable *market* size. But purchasers are learning to buy and eat, as we learn to cultivate; they are becoming more difficult to please and more discriminating in their prices, so that by and by cultivators will discover that it will not pay to be slovenly.

Cincinnati has almost a "world wide" strawberry fame. Her cultivators have penetrated so deeply into its interesting philosophy, that the most learned among the modern Athenians, with all their pomological wisdom, can not get along without an occasional lecture from them. They have been *pioneers* in the extensive culture of the strawberry, and have promulgated, in the face of stern opposition, some wholesome truths in regard to "stamens and pistils," now very generally carried into practice. But, judging from samples sent this way the present season, and from reports of eye witnesses, their strawberries are far behind those of Rochester, in point of size and beauty at least. We have been looking over the report of the fruit committee on their exhibition of the 3d and 4th of June last, and find that *McAvoy's Superior*, that last year received Mr. LONGWORTH's premium of $100, has been again awarded the first premium as the best variety exhibited. *Schniecke's Pistillate* is highly spoken of, and many new promising varieties are announced.

The display made by the *Genesee Valley Horticultural Society* on the 25th and 26th of June last, has perhaps never been surpassed, if equalled, in this country. R. G. PARDEE, Esq., of Palmyra, exhibited about forty varieties; several others, from twelve to twenty varieties each. From among these, the fruit committee, consisting of practical cultivators and critical judges, awarded both the first and second premiums to *Burr's New Pine*, "*placing flavor and productiveness before size.*"

This would seem to answer the question, What is the best strawberry grown around Rochester? For several years — indeed, ever since its introduction — the *Burr's New Pine* has been acknowledged to be one of the finest flavored fruits that has been grown or exhibited here. No fruit ever acquired such a popularity in so short a time. But it is worthy of it. The plant is hardy and productive; the fruit large, handsome, and good. The fruit committee of the *Albany and Rinsselaer Hort. Society* awarded to it the first premium both last year and this. The report this year reads thus:

"For the best and finest flavored variety, to JOEL RATHBONE, for *Burr's New Pine*—beautiful specimens—$2.

"For the second best and second finest flavored variety, to C. P. WILLIAMS, for *Hovey's Seedling*—very large and beautiful specimens—$1.

"The committee, in awarding this premium, wish to remark, that notwithstanding they think the flavor of *Burr's New Pine* more delicate and delicious than that of any other variety exhibited, still it is not considered by them as beautiful, as hardy, or as prolific, as the *Hovey's Seedling*, and consequently not so desirable for cultivation on a large scale."

At Rochester the *New Pine* is generally considered more productive than *Hovey's*. We have not seen a crop that would form an exception to this.

The *Large Early Scarlet* is another sort that stands well with the growers here; it never disappoints. Our committee report it "early, productive, and a valuable fertilizer." We have never known it fail to yield a good crop, and it is patient under bad treatment—doing well where others would die out. If we were to be confined to one variety, we should venture to choose this.

Hovey's Seedling is popular here and everywhere, on account of its great size and beauty. In *size* especially it surpasses all others except the *British Queen*, but it is by no means a great bearer in the gardens of this part of the country, whatever it may be elsewhere. It is more variable in this respect, too, than many others. This season the crop here has not been so good as usual. We went some twenty-five miles almost on purpose to see a bed of this variety from which great things were expected, but we found it a total failure. We saw a large plantation of the most luxuriant plants, rejoicing in the most generous treatment, but not a perfect berry was to be seen. The cultivator is renowned in the art of producing wonderously large strawberries, but this time he made a sad failure. He is said to belong to the "old school," and is therefore an unbeliever in "stamens and pistils"—the necessity of providing a fertilizer. This must be the cause of his failure; and it has probably cured him of his unbelief, for we saw where fresh rows of staminate flowered plants had been not long planted near the *Hoveys*. We think if he had planted his fertilizers at the proper time, he would have had really a model strawberry bed.

The *Boston Pine* (HOVEY'S) is falling in estimation here. It is a prolific, good variety, but needs good soil and first rate cultivation. When the plants grow old, and the ground nearly covered with runners, it is worthless. But it is worth good culture; and its falling off is more the fault of our cultivators than of the plant. It requires to be kept in "hills," free from runners, and in rich soil.

Burr's Rival Hudson is valued here as being very productive, and particularly good for preserving. *Burr's Ohio Mammoth* is a very large and productive variety, light colored like the *New Pine*, but of rather indifferent flavor. *Iowa*—medium size, a great bearer, and of medium flavor; plant hardy and vigorous. This is used by some as a fertilizer, and answers well for this purpose; but for this region we prefer the *Large Early Scarlet*. *Lizzie Randolph* is a large, handsome berry; plants vigorous, and bear well; but, as far as we have seen, of poor flavor and quality. *Black Prince* generally bears an excellent crop with us. Many admire its peculiar, rich, mahogany color. The flavor this season, when fully ripe, was fine. On the whole, we put this among the best sorts. We see it has figured largely at the Kentucky exhibitions. *Bishop's Orange* and *Crimson Cone* are two old varieties that always yield well, and the fruit is of good quality; size medium. *Burr's Scarlet Melting* is a medium sized, tender fruit, and an immense bearer. *Jenny's Seedling* is a large, fine variety, that we think will prove valuable.

British Queen.—This magnificent English fruit, the queen of all strawberries, does not succeed well in this country; we have not seen a good specimen this year. It is almost abandoned; but we learn from the *Horticulturist* for July, that Dr. HULL, of Newburgh, has succeeded in raising a magnificent crop—Mr. DOWNING says, "much the finest flavored and most beautiful large strawberries that he has seen grown in this country. The color is darker, and they appear to have attained a perfection of quality never reached in England." We would cheerfully travel from Rochester to Newburgh to see better "*British Queens*" than we have seen in England.

Our seedling *Genesee* has sustained itself well; the crop this season was the best on our grounds. We know of no other variety that shows better in the bed; the fruit is so uniform, of a fine, clear, red color, and stands well up. It must become a valuable market sort, deficient in fine flavor.

Monroe Scarlet and *Orange Prolific* are both valuable seedlings of ours, great bearers and hardy. Our neighbors, Messrs. BISSELL & HOOKER, have also some seedlings that promise well.

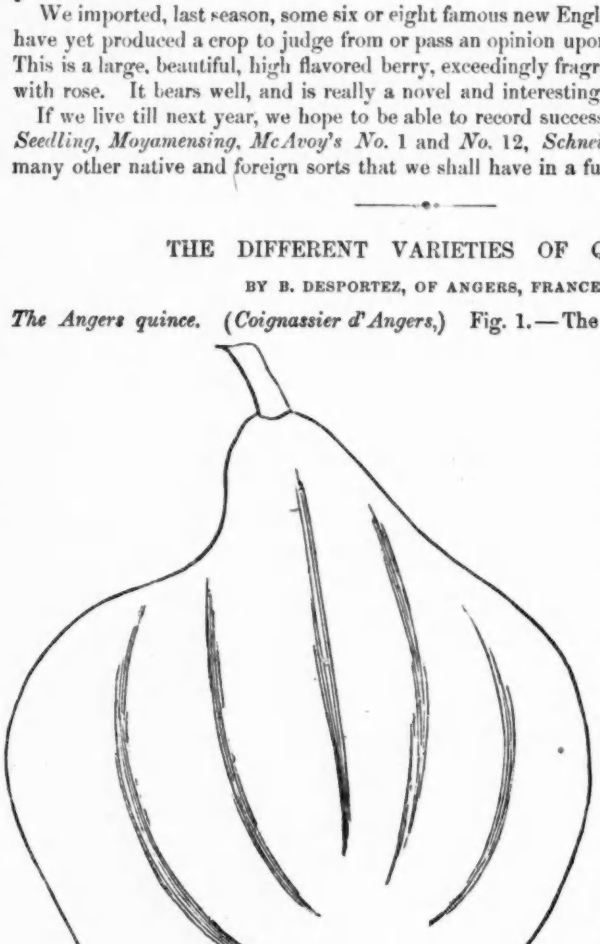
We imported, last season, some six or eight famous new English sorts, but none of them have yet produced a crop to judge from or pass an opinion upon, except the *Bicton Pine.* This is a large, beautiful, high flavored berry, exceedingly fragrant; *white*, slightly tinged with rose. It bears well, and is really a novel and interesting acquisition.

If we live till next year, we hope to be able to record successful results from *Walker's Seedling, Moyamensing, McAvoy's No.* 1 and *No.* 12, *Schneike's Hermaphrodite*, and many other native and foreign sorts that we shall have in a full bearing state.

THE DIFFERENT VARIETIES OF QUINCE.

BY B. DESPORTEZ, OF ANGERS, FRANCE.

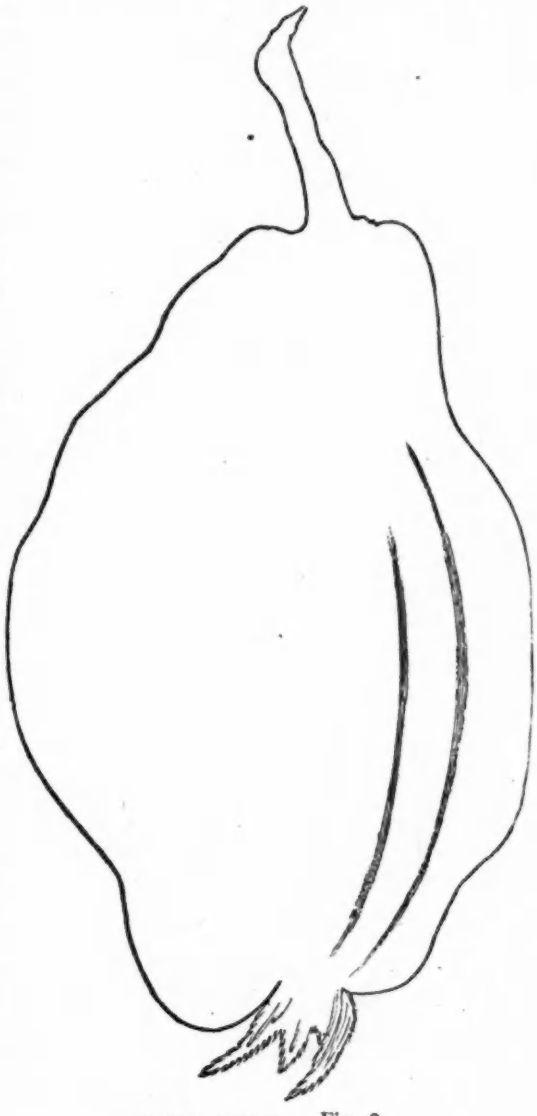
The Angers quince. (*Coignassier d'Angers,*) Fig. 1.—The nurseries of Angers have for nearly a century, been the most extensive in France, and perhaps even on the whole continent. This branch of industry (which covers in the establishment of M. LE ROY, alone nearly 200 acres of land, and occupies 100 to 125 workmen, according to the season.) has by its intelligent labors produced some races of plants peculiar to the nurseries of this region. The most important of these without doubt, and that which has contributed largely to the prosperity of this horticultural town, is the *Angers Quince.* It has been said that this species was created expressly to receive the grafts of the pear. It is so extensively propagated, that all the country around for a considerable distance is covered by nurseries occupied in greater part with this quince. It is not difficult to manage in regard to soil, and grows so rapidly that if planted in the



ANGERS QUINCE. Fig. 1.

winter, it is fit to be worked (budded) in the August following, and in two years to be sold under the form of pyramidal pear trees—*poirier en pyramide.* The quantity of it exported annually, under the form of both quince and pear, is almost incalculable, and not only holds all parts of Europe, but Africa and the two Americas, tributary to this town for its products. It is the principal branch of commerce of the nurseries; and I should say even, that it has in greater part made their fortunes and reputation.

The *tree* has upright shoots when young, and few thorns or spines. The *leaf* is large. *Fruit* large, turbinate, largest in the middle, ribbed, and irregular. The *stem* is short, hard, and planted on the surface. The *eye* is large and wide; divisions of the calyx leafy and toothed; the basin of the eye is lightly ribbed or plaited. The *skin* is yellow, cottony, with some large dots of gray or black. The *flesh* is coarse and hard; juice acid, not abundant, and it has the same perfume as all the quinces. The quality is the same as the *Portugal*, and in this country it is the most fertile, and the species most commonly employed in making preserves. The *flower* is small, globular, bright rose; the petals are striped with lines of rosy carmine extending from the base to the point; the flower bud is obtuse; the ovary is small and short; the sepals are small, and furnished on the under side with small points, and slightly downy.

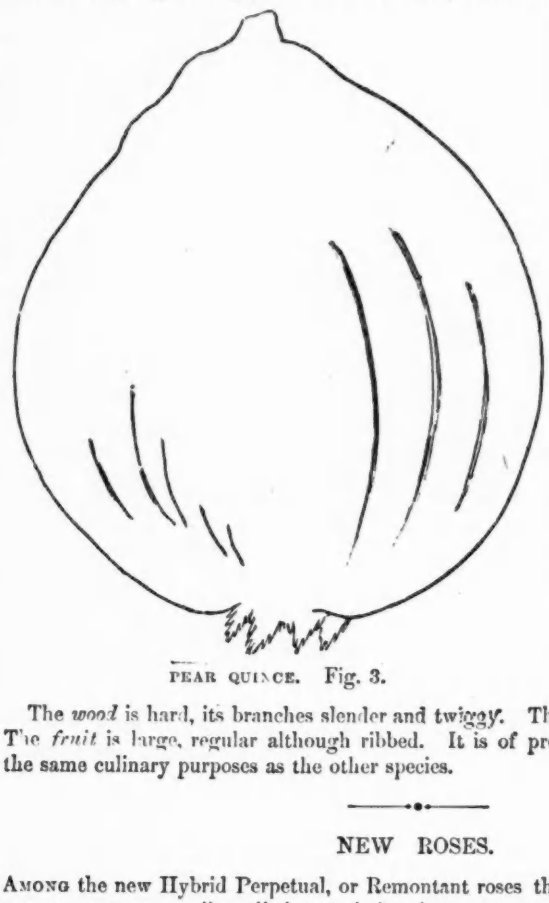


OBLONG QUINCE. Fig. 2.

After having made known the *Angers Quince*, a species which is worthy of being more extensively cultivated than it is at present, it may be useful to give figures and descriptions of others, from specimens grown in M. Le Roy's nurseries.

The Oblong Quince. (*Coing long ou oblong.*) Fig. 2.—*Fruit* very long and very irregular, largest in the middle, with cavities on the surface terminating abruptly toward

the stem. *Eye* leafy; divisions of the calyx very long, placed in a deformed cavity. *Flesh* coarse, dry, spongy; quality *mediocre*. *Stem* obliquely inserted and very hard. Arrives at maturity in November. The *flower* is very large, much expanded; white, tinted lightly with rose; petals almost round, edges wavy, and lightly striped with rose in the interior; the flower bud is very large, largest in the middle, conical at the top; sepals long, elliptic, deeply toothed, and thickly covered with a whitish down; the ovary is large and long. The *leaf* is very large, wavy, swelled, downy underneath and smooth above; sometimes the leaves are long, elliptic, and lanceolate, at others round.



PEAR QUINCE. Fig. 3.

THE PEAR QUINCE. (*Coing poire.*) Fig. 3.—This variety is not cultivated in the nurseries at Angers, and it is with difficulty that one can procure it in this country. The only plant which I know is that in the specimen grounds of M. LE ROY. It is very common in the nurseries of other towns, particularly at Paris and Orleans, where the gardeners call it the "*Coignassier Femelle*" female quince. It is this which they use as a stock for their pears. Its vegetation is much more slow than that of the *Angers*, so that it can rarely be budded the same year it is planted.

The *wood* is hard, its branches slender and twiggy. The *leaves* are small and downy. The *fruit* is large, regular although ribbed. It is of pretty good quality, and serves the same culinary purposes as the other species.

NEW ROSES.

AMONG the new Hybrid Perpetual, or Remontant roses that have bloomed with us this season, are some excellent distinct varieties, that are very valuable additions to this interesting class of roses. We give the following garden notes of a few:

Baronne Hallez—Light crimson, with a carmine shade; beautifully formed; a good grower.

Caroline de Sansal—Pale flesh color; nearly as large and fine as *La Reine*; robust growth, and large foliage; decidedly the best light colored one we have yet seen.

Gen. Cavaignac—Rosy carmine; good shape.

Gen. Morangiez—Rosy pink; beautiful form and robust growth.

Eliza Balcomb—White with a fleshy tint; small, delicate, and pretty.

Pauline Buonaparte—Pure white; small; habit dwarf.

Madam Fremion—Bright rosy carmine; good shape; free growth; distinct and beautiful.

Madam Lamoriciere—Clear, transparent rose, under side of petals nearly white; perfect form; one of the very best; quite distinct.

Gen. Charngarnier—Purplish crimson; very large; habit vigorous; distinct and fine.

Madam Trudeaux—Light crimson; large, finely formed; free growth; distinct.

Pius the 9th—Deep red, with a purplish tint; large and fine; robust, and a profuse bloomer; quite distinct.

Standard of Marengo.—Brilliant crimson; a beautiful rose, but not very double.

Reine des Fleurs—Pink, with a lilac shade; perfect form; a beautiful rose.

Commandant Fournier—Rosy red; a large, bright, showy rose.

Comte de Montalivet—Purplish crimson; very large, and finely formed.

Comte Bobrinsky—Brilliant scarlet, with a carmine shade; a striking, superb rose; dwarf habit.

Poniatowski (Vibert)—Dark, purplish crimson; outside dark, almost maroon; center light; changes; distinct and beautiful.

Nothing yet surpasses or equals the *Geant des Batailles* in dazzling brilliancy, nor *La Reine* in fullness and perfect form. *Baron Prevost, Duc d'Amaule, Wm. Jesse, Madam Laffay*, and *Robin Hood*, are also fine yet, and likely to remain valuable for some time.

Pinney's Orchards.—H. P. Norton, Esq., of Brockport, furnishes to the *Rural New Yorker* an account of the orchards of Austin Pinney, Esq., of Clarkson, N. Y., from which we learn that Mr. P. has now 3000 peach trees, 2600 pear trees on quince stock, 200 ditto on pear stock, making in all 5,800 trees. We know something of Mr. Pinney's zeal in fruit-culture, and with the finest land in the heart of the finest fruit-growing section of America, we do look for model orchards indeed. The splendid new railroad from Rochester to Niagara Falls runs through the village of Brockport a mile from Mr. P.'s farm, so that he is now fairly on the highway of life, and can dispatch his fruits, as they ripen, to the great markets that are anxiously awaiting them, both east and west. Success to Pinney's orchards.

Noticing that Mr. Southworth, of Penfield, (who you will remember was awarded our Society's first premium for *Burr's New Pine* strawberry,) was bringing large quantities of strawberries daily to market, I requested him to report his success in his first attempt at raising this fine fruit. His land is of a sandy loam, and he says that the frost never throws out the roots, by which they so often perish. Last season he planted out five-eighths of an acre of the vines of *Early Scarlet, Hovey's Seedling, Burr's New Pine*, and *Alpine*. His *Scarlets* produced early and well, and his entire crop he estimated at 2000 quarts, which he sold in our market at $265. He has taken up his *Alpine*, and planted the same ground and half an acre more with *Burr's New Pine*, which he says bears double what the *Hoveys* do. Jas. H. Watts.—*Rochester, N. Y.*

The Black Excrescences on the shoots and limbs of plum trees are now coming, and they sometimes break out on the bodies of small trees in such a way that it is difficult to remove them with the knife, without cutting away the whole tree. I have this summer had three such cases, and have cut off most of the tumor and wet the remainder with spirits turpentine. The tumor in each case has ceased to grow and has perished. In the first instance the turpentine spread a little around the sore, and destroyed the life of the bark as far as it went. I was after that careful to wet only the tumor. The sores were on trees that I set this spring. None came on trees that I have kept for a few years with the ground well manured and *salted*. I esteem them a *scroffulous* disease of the tree. S. C. Hamilton.—*Buel, N. Y.*

Ladies' Department.

CALANDRINIA.

THE ornamental species belonging to the genus Calandrinia are mostly natives of South America, and like the mignonette are shrubby plants there, though with us, and also in Europe, they are treated as annuals. The name Calandrinia was given to this genus in honor of L. CALANDRINI, an Italian botanist. We have many plants of this genus, but the only one that has yet flowered is the *Calandrinia Speciosa*, and of which the accompanying engraving is a very good representation. Few flowers have a more striking effect than this little Calandrinia, with its brilliant dark crimson flowers peeping out from its thick and beautiful bed of leaves. The flowers open in the morning, and present as rich a mass of foliage and flowers as can be desired; but by three o'clock in the afternoon every little flower is closed. With the exception of the early closing of the petals, this species deserves to be generally cultivated, as nothing can exceed the rich velvety look of the flowers. It is quite hardy, a true annual, and ripens its seeds in great abundance. It is a native of Northern California, whence its seeds were sent to England in 1832, by DOUGLAS. It should be sown in dry and exposed situations, where it can have abundance of light and heat; as the situation in which DOUGLAS found it was a hot, dry bank. It requires very little water, and flourishes best in weather when most other plants are burnt up. It is well adapted for rockwork. It may be sown two or three times during the season, and at any time from April to July.

CALANDRINIA SPECIOSA.

Calandrinia Grandiflora is another species, the flowers of which were so much larger than those of the earlier introduced, that Dr. LINDLEY gave it the name of *Grandiflora*, or large-flowered; but the name seems now inappropriate, as the flowers of *Calandrinia Discolor*, or discolored Calandrinia, are more than twice as large, and is really the finest of the species.

Editor's Table.

Trial of Implements at Geneva.—Our paper goes to press too early to permit us to give an account of this exhibition. A large number of Mowing, Reaping, and Threshing machines are entered for competition. On the first day the Mowers were tried, and the competition was very spirited. On the second day we witnessed the trial of Reapers, some eight in number. The trial was very satisfactory. The number of people assembled was not large at any one time.

Town Agricultural Societies.—A correspondent informs us that they intend getting up a Town Agricultural Society in Naples, Ontario county, N. Y., and asks our opinion of the plan. We cordially approve of it, and think its general adoption would be attended with great benefit to the agricultural interest. Not that we wish them to supercede the County and State Agricultural Societies, but to co-operate with them. The Town Fair should be held a few weeks previous to the County and State Societies, and selections be there made of articles to be sent to the County and State exhibitions. In this way we should have individual, town, county, and—when we have our National Agricultural Show—State competition, which cannot fail to facilitate the march of agricultural improvement.

Russell Comstock, the professed discoverer of "*a natural law in vegetable growth and life*," has been delivering lectures to the farmers in Western New York, the past few weeks, at a dollar a head. An introductory lecture was delivered in this city, which was not very satisfactory, as Mr. Comstock stated that he made it a point at that lecture not to say anything that would expose his system. He, however, told some large stories—such as raising fifteen hundred bushels of potatoes on an acre by his system, which he calls *Terra culture*. The lecture was attended by many of our most intelligent gardeners and nurserymen, who put many important questions to Mr. Comstock, which he declined answering until the *next lecture*. After that *next lecture* we may give our opinion of this new discovery.

P. S. Since writing the above, Mr. Comstock has called upon us, and we learn from him that it is not his intention to divulge his secret in Rochester, until two hundred have signified their intention of attending. If this number is obtained in season, Mr. Comstock will lecture on or about the 21st of August. Mr. Comstock has been in town some six or eight weeks, and could at any time since his arrival have obtained an audience of from fifty to one hundred; and the fact that he refuses to lecture to this number, creates a little suspicion.

Zinc Paint.—Oxide of lead for many years has been the main ingredient in all oil paint. This being a virulent poison, painters have always been subject to a disease called *Painters' Cholic*, the effects of this poison upon the system. We notice in a report of the Sanatory Committee of Paris, that in one year there were 302 cases in that city, of which number 12 died and one became insane. Many of the *colors* used are also poisonous, such as green from copper. M. Lecaire, a house-painter of Paris, after trying a series of experiments for four years, with a view to remedy this evil, finally succeeded in not only obtaining a white paint that is entirely harmless, but also the colors; and his paints are represented by high French authority as being more durable, as well as more beautiful than the old. His discoveries are—

1st, A pure and dazzling White—the oxyde of zinc.

2d, A gold, lemon, and straw Yellow—a preparation of the oxyde of zinc.

3d, An excellent Red, having for its base sulphate of antimony.

4th, A number of fine Greens, resulting from the oxyde of zinc and the sulphate of cobalt.

5th, A perfect drying oil, which is obtained by boiling 100 pounds of linseed oil with five pounds of per oxide of manganese.

We have examined the White Zinc Paint, at the store of M. F. Reynolds, who is the agent for this city, and for beauty and clearness it is far superior to any preparation of lead paint.

In Sussex county, N. J., large veins of zinc ore exist, and some years since an association under the name of "The New Jersey Zinc Company" was formed for manufacturing this ore into paint. The *Scientific American* says: "The Company about two years ago erected works on the Passaic river, near Newark, N. J., and manufactured white zinc paint, and various shades from a light cinnamon to a cinnabar color. The sales of the Company amount to seven tons of paint per day, and in a few years will amount to twenty tons."

JEFFERSON COUNTY FAIR.—The annual show of this Society is to be held at Watertown, on the 16th and 17th of September. In addition to the complete premium list offered, Messrs. HUNGERFORD and BRODIE give a challenge for a sweepstakes, for the best five Long Wooled ewes, not over two years old, owned in the State of New York. Their conditions are, that each intending competitor is to deposit the sum of $10 with the Secretary of the Society, on or before the first of July next. The sheep to be exhibited at the time of the next Fair at Watertown, and the Judges to be the committee appointed by the Society, on Long Wooled sheep.

They also give a challenge for a sweepstakes, for the two best fat ewes, of any age, owned in this State. Conditions same as above.

AGRICULTURAL FAIRS.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge. The officers of any that have been omitted will please notify us, giving time and place. Those sending notices in papers, will please mark them, or they may escape our notice.

STATE FAIRS.

New York, at Utica,	Sept.	7, 8, 9, 10
Ohio, at Cleveland,	"	15, 16, 17
Michigan, at Detroit,	"	22, 23, 24
Canada West at Toronto,	"	21, 22, 23, 24
Vermont, at Rutland,	"	1, 2, 3
Pennsylvania	Oct.	20, 21, 22
Wisconsin, at Milwaukie,	"	6, 7, 8
New Hampshire,	"	6, 7, 8
Georgia,	"	18 to 23
Maryland, at Baltimore,	"	26, 27, 28, 29
American Pomological Congress, at Philadelphia	"	13
American Institute, at New York,	"	5
" Exhib. of Stock,	"	19, 20, 21
Rhode Island Society of Improvement, at Providence	Sept.	15, 16, 17
New England Society for Improvement of Poultry, at Boston,	"	7, 8, 9, 10

COUNTY FAIRS.

Saratoga, at Mechanicsville,	Sept.	15, 16, 17
Rensselaer, at Troy,	"	22, 23, 24
Clinton, at Keeseville,	"	22, 23, 24
Essex,	"	20, 21, 22
Suffolk, at Huntingdon,	"	22
Otsego, at Morris,	"	22, 23
Jefferson, at Watertown,	"	16, 17
Cortland,	"	15, 16
Greene, at Cairo,	"	21, 22
Columbia, at Chatham 4 Corners,	"	29, 30
Madison, at Eaton,	"	22, 23
Wayne, at Wolcott,	"	21, 22
do. at Palmyra,	"	28, 29
Rensselaer, at Troy,	"	22, 23, 24
Herkimer, at Herkimer,	"	28, 29
Ontario, at Canandaigua,	"	29, 30
Monroe, at Rochester,	"	29, 30
Wyoming, at Warsaw,	"	22, 23
Seneca, at Waterloo,	Oct.	14, 15
Genesee,	"	6, 7
Cayuga, at Auburn,	"	6, 7
Putnam, at Carmel,	"	5, 6
Richmond,	"	17

TOWN FAIRS.

East Bloomfield,	Sept.	22
Brookfield, Madison county,	"	29, 30
Cape Vincent, Jefferson county,	"	15

THE JOURNAL OF THE U. S. AGRICULTURAL SOCIETY.—The Executive Committee of the U. S. Agricultural Society voted $200 to get out the first number of the Journal, in which is contained an account of the doings of the National Agricultural Convention, and such other matter as may be deemed appropriate, and useful to the farming community. This work, which is expected to be issued quarterly, is placed in charge of DANIEL LEE, who is somewhat known to the readers of the *Genesee Farmer*. We can only say that the best talent in all the States is pledged to aid, hereafter, in making "The Journal of the United States Society" an honor to the first agricultural nation on the globe; and that such as desire to join the Society, and participate in the advantages which it offers, can do so by sending two dollars to WILLIAM SELDEN, Esq., Washington, D. C., Treasurer of the Society, or to DANIEL LEE, its Corresponding Secretary, who will see that all names are duly entered, and that the Journal, seeds, &c., are properly mailed. The first number of the Journal will be published in this month, (August,) and contain 144 pages.

IT will be seen by Mr. DORR's advertisement, that he has changed the time and place of the sale of his Morgan colts.

ADVERTISEMENTS, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

Inquiries and Answers.

CULTIVATION OF CELERY.—I find myself compelled to ask your counsel in regard to raising celery. I understand something about it theoretically, but wish to learn through the *Farmer* the whole practical part, from sowing till it is ready for the table, after which I can manage it. I have already trenched some, though I do not see how I can economically blanch it. Please teach me all you conveniently can in regard to it. CHARLES BRACKET.—*Rochester, Ind.*

Celery seed should be sown as early in the spring as the weather will admit. If sown in a hot-bed and transplanted when an inch and a half or two inches high into a bed in the open air, to strengthen, so much the better. Let them remain in this bed till four or five inches high, when they must be transplanted into trenches. The trenches should be dug about eighteen inches deep and four feet apart. Place some *well rotted*, rich manure about six inches thick at the bottom of the trench, and on the top of this some five or six inches of very rich surface soil or compost. In

the trench thus prepared, carefully transplant the celery plants about six inches apart, with as much earth remaining round the roots as possible; water them well for a few days; and if the weather is very hot, it will be necessary to shade them till they have taken firm root. They grow but slowly at first. Loosen the soil around them occasionally, and as they grow they must be earthed up. In doing this, be careful that the soil does not get between the leaves; take the leaves of the plant in one hand, and place the soil around it with the other to within a few inches of the top. Repeat the operation every week or so, as the plants grow, and you will have a crop of celery that will well repay all the labor. Before winter sets in, take it up and place it in the cellar with a little earth at the roots, and you can have celery until spring.

Smut in Wheat.—I wish to make a few inquiries in regard to a subject very important to the farmers of this section of Kentucky. The wheat crop of this whole region is very much affected by a disease called the smut—a disease entirely new to this part of the country—the oldest inhabitants not having seen it before.

For fear there may be some misapprehension as regards the true affection, I will attempt a description of it as it appears here. There are no very marked differences in the heads of wheat until a few days before ripening; then the diseased heads appear more full and dark than the sound, and the capsules are in some instances filled with a dark grumous mass, and in others with a dark, impalpable powder, and emitting a most offensive and disgusting odor.

Can you, or some of your contributors, inform us in regard to its cure or prevention; and whether the disease is influenced by a wet or dry season; and also whether the disease is communicated when the grain is forming, or may it be produced (as some suppose) in sound wheat merely by bringing the smutted wheat in contact with it; or, in other words, whether wheat perfectly sound would another year be diseased by having come in contact with smutted heads now? All the information you can give us upon this subject, through the columns of your valuable and widely circulated journal, will be thankfully received by a subscriber R. S. Owen.—*Wilsonville, Ky.*

Few subjects connected with agriculture have been more discussed than that of smut in wheat; innumerable theories have been advanced to account for the cause, and as many remedies proposed for its prevention. Of these we can not now speak; our correspondent will find the matter discussed at full length in the Farmer of 1850. Whatever may be the cause, it is pretty certain that the prevention is easy and effectual in several ways. We know of nothing more simple and efficacious than to wet the wheat seed before sowing with a solution of salt and water, and drying it with caustic lime. The solution should be made so that an egg will just swim in it, and the seed be well wetted and limed *immediately previous to sowing;* for if it is left for many hours in a heap or in bags, it often heats, and the germinating principle is weakened or destroyed. Instead of salt and water, chamber lye is frequently used, and is, in our opinion, preferable.

When to Sow Grass Seed.—I have been a subscriber to the *Farmer* for two years, and have carefully examined it to find some statement in regard to sowing grass seed, but have not been able to learn anything in regard to it. When is the best time to sow it—in the spring or fall? D. S. Chase.—*Tekonsha, Mich.*

For permanent meadow, and on dry land, we should prefer to sow timothy seed in September, with the wheat, previous to the last dragging. The plant acquires a strong, vigorous growth during the fall, and will generally stand the winter, yielding a heavier crop of hay the first season than if sown in the spring, though it sometimes injures the wheat crop on land naturally inclined to grass.

If timothy alone is sown, from half a bushel to a bushel of seed per acre is necessary, according to the soil—clays requiring much more seed than rich, mellow loams. It is sometimes sown *alone* in August or September, and in this way a good crop of grass is often obtained the following summer.

Except in rare cases, we would never sow timothy on good wheat land, as a rotation crop; for being a cereal, it exhausts the soil of the same elements as wheat, and our wheat soils are not now any too rich, even under the best management. If timothy must be grown, let it be on land not well adapted to wheat; and on such soils it must be sown in the sping, as it is apt to winter-kill on low, alluvial land.

Cooking Food for Hogs.—I wish to make a few inquiries in regard to the feeding of swine, &c. Will a given amount of food produce a greater amount of pork if fed warm than if fed cold? It is the opinion of many old farmers in this vicinity that it will, especially if fed in winter. Will science bear them out in this opinion? They usually scald their Indian meal by the use of boiling water. Is this cooking it sufficiently? S. Carter, Jr.—*Amherst, New Hampshire.*

We have never made a satisfactory experiment on feeding hogs with cooked and uncooked corn meal, but have done so with barley meal and potatoes fed raw or uncooked, and with the potatoes steamed till they would beat to a pulp, and the barley meal mashed with them as soon as the potatoes were taken from the steamer. The result was decidedly in favor of the cooked food; so much so, that the plan was ever afterwards adopted, the extra increase of the hogs much more than covering the expense of cooking. The experiment was during the winter months, with six hogs in each stye.

Boxes for Feeding Cattle, &c.—I wish to make some boxes, from which my cattle may eat hay, straw, cornstalks, &c. What should be the form, size, &c.? Also some racks for sheep. What is the best form? Should the slats be far enough apart to allow them to pass their heads through? Cyrus Bainbridge.—*Romulus, N. Y.*

Will some of our experienced correspondents give their views on this subject?

HORTICULTURAL.

(D. E. G., Haviland Hollow, N. Y.) It makes no matter whether you take buds from dwarf trees or standards, or whether on quince or pear stocks, provided always the trees be in perfect health and vigor; this is the main consideration.

How will the plum succeed grafted on the peach? S. CARTER, JR.—*Amherst, N. H.*

Some varieties do well; but they must be in a light, dry soil.

MR. BARRY will confer a favor upon many of your subscribers, by stating in his department at what season it is best to transplant evergreens. N. W. T.

If from the nursery, any time in April or May; but if from the woods, about the time they are starting to grow.

Is the fall season as good as the spring for planting out fruit trees? And what month in the fall? CHAS. H. MORRISON.—*Oxford, Ia.*

For hardy trees, we prefer the fall, as soon as a sharp frost has completely arrested vegetation. In Western New York, about the 10th or 15th of October, and for a month after.

I WRITE to ask of you the kindness of letting us know through your columns, which is the very best work, in your knowledge, upon rural homes, giving also the address. We have heard of *Downing's Horticulturist;* if it is the best, please acquaint us with its address and terms.

Our situation will be on the edge of one of the many rich and beautiful prairies of Southern Illinois, overlooking an extensive undulating plain, bedecked the greater part of the season with sylvan groves and innumerable flowers. We wish to fix upon the plan for our yard, flower garden, fruit garden and orchard, the coming fall, and also for a nursery of evergreens and fruit trees; therefore we should like to be examining some excellent work upon this subject as soon as possible. We would of course wish one devoted almost exclusively to horticulture, as we have yours for agriculture, and one not lacking in engravings of sweet homes nestling in nature's green lap. E. J. COPE.—*Fairfield, Ill.*

Three good works for you—*Downing's Landscape Gardening, Wheeler's Rural Homes, Barry's Fruit Garden.*

WILL you please to give me some information, if you have had any experience in tarring young fruit trees in the fall or beginning of winter, in order to protect them from the mice? If you have never experimented upon it, give your opinion as to its efficacy, and whether it will injure the trees or not. If it is a sure preventive, as I have heard it rumored, it will be one of the greatest blessings of the day to nurserymen and farmers. A. C. HALL.—*Marcy, Oneida Co., N. Y.*

We have had no experience with tar for this purpose, and should not advise its use. *Clean culture* around orchards is of great importance, and mice may be pretty effectually kept off by throwing up a small mound of earth around each tree, say a foot high, to be levelled down in the spring.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators.

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-4t. State Ag. Warehouse, 25 Cliff st., New York.

The Water Cure Journal.

A NEW VOLUME commences with the present July number. Published monthly. Illustrated with engravings exhibiting the structure, anatomy, and physiology of the human body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

TERMS.—Only One Dollar a Year, in advance. Please address, post paid, FOWLERS AND WELLS, No. 131 Nassau street, New York.

A few brief Editorial Notices may be acceptable to those unacquainted with the Journal. We copy:

From the New York Tribune.

"The Water Cure Journal holds a high rank in the science of health; always ready, straight-forward, and plain-spoken, it unfolds the law of our physical nature, without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats."

From the Fountain Journal.

"Every man, woman, and child, who loves health, who desires happiness, its direct result, who wants to 'live while it does live,' 'live till he dies,' and really live, instead of being a mere walking corpse, should become at once a reader of this Journal, and practice its precepts."

From the New York Evening Post.

"THE WATER CURE JOURNAL.—This is, unquestionably, the most popular health Journal in the world."

THIS HYDROPATHIC JOURNAL now enters upon its Fourteenth Volume, with a circulation of FIFTY THOUSAND COPIES. The ablest medical writers are among its contributors, and all subjects relating to the Laws of Life, Health, and Happiness, may be found in its pages. Now is the time to subscribe. [8-2t]

Hallock's Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. E. D. HALLOCK.

July, 1852.

Spanish and French Merino Sheep.

THE subscriber has on hand, and for sale, pure bred Spanish Merino bucks and ewes that are one year old, and one French buck three years old, and lambs that are half French and half Spanish, both bucks and ewes, that were sired by my imported buck that took the first premium at the State Fair at Rochester, in Sept., 1851.

REED BURRITT.

Burdett, Tomp. Co., N. Y., Aug., 1852.—8-1t*

Great Sale of Superior Thorough-bred Short-Horn Cattle.

THE subscriber will offer for sale his entire herd of choice Short-Horns, comprising 50 head, young and old, at public auction, on Wednesday, the 13th of October, 1852, at 1 o'clock P. M., at his farm, 2½ miles from the city of Troy; reserving to himself one bid on 5 cows and heifers and one bull, say six head in all, and these to be pointed out previous to the commencement of the sale. This bid will be made public when the six animals are brought to the stand for sale. Should any gentlemen advance on the single bid made by the proprietor, the highest bidder will be entitled to the animal. It is proper to say, the severe drouth in this vicinity reducing the hay crop one half, has decided the proprietor to make this sale at the time named, instead of next June, which he had purposed to do.

The well established reputation of this herd in this Union, and in Canada, and the splendid herd it has measurably sprung from, viz: the famed herd of that eminent English breeder, the late Thomas Bates, Esq., renders it hardly necessary to comment upon its superior merits. It may not however be inappropriate to remark, that the establishment of this herd was commenced in 1838, and that the most careful attention has since been paid to its breeding, and that it now contains mostly all the reserved stock of two former public sales. Since 1840, the proprietor has imported from the late Mr. Bates, and his friends and late tenants the Messrs. Bell's, 7 head of Short-Horns. And besides these, he has now on the passage across the Atlantic, shipped 21st June, on board the packet ship Kossuth, Capt. Jas. B. Bell, a superior yearling roan bull, having many crosses of the famed Duchess bulls of Mr. Bates. Including this latter animal and the two beautiful red roan 3 year old heifers which came out from England last September, "Yarm Lass" and "Yorkshire Countess" and the beautiful heifer calf of the latter animal, got in England by the Duchess bull "5th Duke of York," there will be 14 head of this imported stock, and its immediate descendents. There has been sold from this herd but 3 heifers from these importations, and these cows were sold at $300 each. All the young bulls bred from these cows, except those now offered for sale, have also been sold at private sale, at $300 each, most of them while quite young.

Besides these 14 head of high bred animals, the noble premium cow "Esterville 3d," bred by E. P. Prentice, Esq., of Albany, and her equally fine 2 year old, red and white heifer bred by me, got by the Bates bull "Meteor," and 8 of the famed milking Willey tribe, the same tribe of cows as the heifer "Ruby," sold by me to Mr. S. P. Chapman, of Madison county, and which cow was awarded the first premium by the N. Y. State Ag. Society, for producing the largest quantity of butter in ten days in June and ten days in August, on grass pasture only, being a fraction over 40 lbs. in those 20 days. There are other valuable tribes in the herd, as the printed catalogue will show.

The catalogue will be ready for distribution about the 1st of August, and will exhibit richness of pedigrees rarely to be met with, showing the descent of the most of the animals from the best animals on record in the English herd book. Having received an invitation from H. Strafford, last winter, to forward a list of the pedigrees of my herd, to be inserted in the forthcoming volumes of the English herd book of which Mr. Strafford is now the editor, several pedigrees were sent to him of the animals here offered for sale, and will appear in said book. Gentlemen are invited to examine the herd at any time.

A credit of 9 months will be given on all sums up to $300, and 9 and 18 months on all sums over $300, for approved paper, with interest, payable at some bank in this State.

Troy, N. Y., August, 1852.—8-3t. GEO. VAIL.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2¾ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention. [4-6t] JOHN GOTT, Jr.

Mansfield's Clover Seed Hulling and Cleaning Machine

WAS awarded, at the Ohio State Fairs 1850 and 1851, the first premiums. Diploma and Silver Medal. Warranted to hull and clean from 20 to 40 bushels seed per day, or from two to five bushels per hour. Cash price of machine $95. Manufactured and for sale by M. H. MANSFIELD,

August, 1852.—8-2t* Ashland, Ohio.

Agricultural Implements & Machinery, Seeds, Fertilizers, &c.

FARMERS Planters, and Merchants, will find at the Agricultural Warehouse of A. B. Allen & Co., 189 and 191 Water street, New York, the largest assortment in the United States, of tools and machines, suited to every soil. Most of the implements sold by them are manufactured in their own machine shop, under the direct supervision of one of the firm, where the best of seasoned timber only is used, with iron of the first quality.

PLOWS.—Of plows they sell more than 100 different patterns, among which are double moldboard, or fluke plows, self-sharpening, subsoil, and side-hill plows.

PLOW CASTINGS of various patterns, among which are bull tongue, scooter, scrapers and shovels, by the ton or retail.

Harrows, Cultivators, Cotton Sweeps, Corn Planters, Hoes, Shovels, Spades, and Forks, of various patterns, in any quantity.

STRAW CUTTERS and CORN SHELLERS, manufactured with much care, extra strong.

Sugar Mills, Rice Hullers, Cotton Gins, Threshing Machines for wheat and oats and rice, Fanning Mills for do. Wheat and Corn Mills, with burr stones or iron plate.

HORSE POWERS of various patterns, suitable for one to eight horses.

REAPING and MOWING MACHINES, Sowing Machines, Grain Cradles, Scythes and Rakes. Every kind of Horticultural Tools; also,

GARDEN and FIELD SEEDS, Fruit and Ornamental Trees, sent to order.

IMPROVED STOCK.—Durham, Devon, and other cattle; Cotswold, Leicester, Southdown, Merino, and Saxon sheep; Suffolk, Lincoln, and Berkshire swine.

A descriptive, pictorial catalogue of over 100 pages will be given, on application from customers, or sent to them by mail on their enclosing four letter stamps, to prepay postage, as required by the present post-office law.

N. B. Genuine Peruvian Guano, Bonedust, &c.

THE PLOW,

A MONTHLY

PLANTERS' AND FARMERS' JOURNAL,

EDITED BY

SOLON ROBINSON,

is now published in place of the American Agriculturist, at FIFTY CENTS A YEAR. Editor's office at the New York Agricultural Warehouse. Specimen numbers will be forwarded, on application, to our correspondents.

A. B. ALLEN & CO.,
189 and 191 Water street, New York.

$1000 CHALLENGE.

I OFFER to place one thousand dollars cash in the hands of a party chosen, against one thousand to be paid into the hands of the same party by any manufacturer of Threshers in the United States, if a machine can be found that will thresh and clean fit for market or seed, with the aid of *only two horses*, 100 bushels of wheat and rye in less time than I can with my "Excelsior Wrought Iron Cylindrical Thresher and Cleaner." The grain to be thoroughly threshed, without white caps, or broken, and the straw delivered long enough to stack, and free from chaff. The winner to receive the $2000 with both machines and powers. For circulars, address Joseph G. Gilbert, 216 Pearl street, New York.

Emery and Co.'s advertisement in April number of Cultivator, with plates, termed by them "Emery's Improved Patent Rack and Pinion Power." I believe to be a direct infringement on "Urmy's Patent," and as attorney for Mr. Urmy I warn all who make or purchase a machine infringing on such patent, that they will be dealt with according to law. These powers can be procured from me only, at less prices than any other good railway power.

Gilbert's Patent Portable Excelsior Wrought Iron Thresher and Cleaner will thresh and clean grain fit for market at the rate of one-half to three-fourths of a bushel per minute, with two horses.

Urmy's Patent Railroad Power is the most durable and the cheapest power to be obtained.

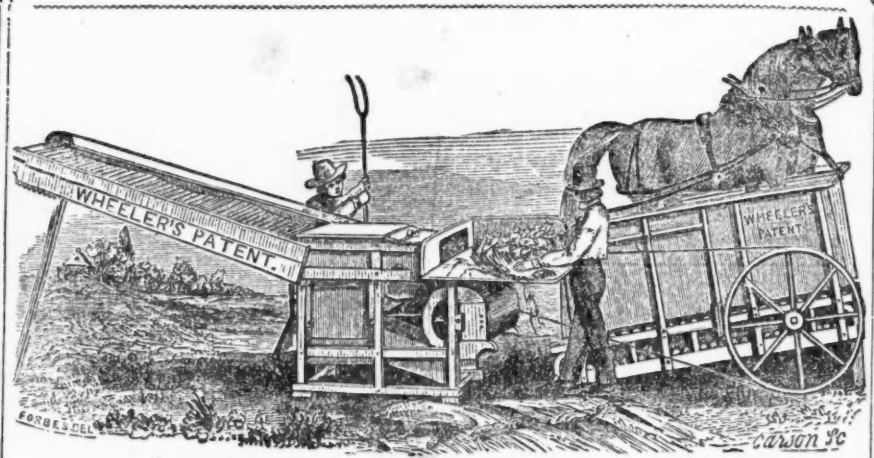
Urmy's Double-geared Lever Power, for 2 to 8 horses.

Urmy's Patent Cornstalk Cutter and Grinder.

Urmy's Patent Seed Drill. Over 2000 of these machines have been sold, and have given general satisfaction.—County rights for sale for $100 and upwards, and castings furnished to manufacture at cost prices. Profits 100 per cent. For particulars, address, post paid,

J. G. GILBERT,

August, 1852.—8-1t*82. 216 Pearl street, New York.



NEW YORK STATE AGRICULTURAL WORKS,

ALBANY, N. Y.,

By Wheeler, Melick, & Co.

THE subscribers, in order to meet the rapidly increasing demand for their Horse-Powers and Threshers, and combined Threshers and Winnowers, and other machines, have recently added to their manufactory a commodious Furnace, so that every article of importance used in the construction of their machines, is now made under their immediate inspection. They are thus enabled to assure their customers that their work is of the most perfect character, both in workmanship and in the quality of the materials used; and in this respect, as well as in all other desirable qualities, they invite comparison of their agricultural machines with any others in the world.

Among the articles we make, are—

Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator, for either one or two horses.

Wheeler's Patent Combined Thresher and Winnower, worked by only two horses.

Wheeler's Clover Huller, Straw and Stalk Cutter, Circular Saw-Mills, Horse Powers geered for churning in large dairies, &c., &c.

With the exception of the Combined Thresher and Winnower, (which is a new invention of last year,) our machines are so widely known as to need no commendation. It is sufficient to say that every article made by us is *warranted to give satisfaction*, or it may be returned after a reasonable trial.

THE COMBINED THRESHER AND WINNOWER

was introduced into the market toward the close of last season, and is in exceeding high favor. We entertain no doubt that it is the most perfect, compact, and efficient machine now in use for threshing and winnowing grain, and it certainly is far the cheapest and most economical.

In our former advertisements in the April and May numbers of this journal, we gave numerous letters from persons who, having used the Winnower, express the highest approbation of its merits. Since then we have received other testimonials of its excellence from gentlemen in different States of the Union, but we have space for only the two following:

From T. Waters, Esq., of Shop Spring, Tenn., dated June 24, 1852.

"Messrs. WHEELER, MELICK, & Co.—I have just returned from W. T. Waters, whose Thresher and Winnower was put in operation this morning. He is as well pleased with it as he anticipated. He can dispose of it at cost, and thinks he will do so, and order another machine from you. My own machine has not arrived."

From W. D. Bacon, of Wisconsin, dated July 2, 1852.

"Messrs. WHEELER, MELICK, & Co.—I am using to-day the Thresher and Winnower you sent me, and it far exceeds my expectations in the perfect manner in which it performs its work. I have had several gentlemen witness its operation, and all concur that it is an extra machine."

We could add others equally flattering if space permitted.

☞ Price of Double Power, with Combined Thresher and Winnower, ... $225
Price of Thresher and Winnower without Power, ... 115

DOUBLE POWER AND OVERSHOT THRESHER AND SEPARATOR.

The superiority of Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator is universally acknowledged. Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. Probably more than four times as many of these machines were sold during last year as of any other kind. They are beyond doubt the most durable and economical machine in use. Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs as on several private occasions in competition, with another machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about *one-third* and in some instances more in favor of our machines. In every case except one, where we have submitted our machine to a *working* test at Fairs, it has taken the highest premiums; and in that excepted case the committee decided that our machine performed its work in 8 minutes and its competitor in 11¾ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan, and Pennsylvania, and also at the Provincial Fair in Upper Canada, at all of which we received the highest premiums, viz: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from county Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator, and Belting, ... $120
Two Horse do., ... 145

SINGLE HORSE POWER AND THRESHER AND SEPARATOR.

This machine is well adapted to the use of farmers raising an ordinary quantity of grain; with two or three hands it is capable of threshing from 60 to 100 bushels of Wheat per day, or twice that quantity of Oats. The same power is also used for churning and for driving Circular and Cross Cut Saws, Cutting Feed, driving Grindstones, elevating Grain, pumping, &c.

Price of Power geared for churning and driving Cross Cut Saw and for Threshing, &c., ... $92
Belt for driving Thresher, &c., ... 5
Thresher and Separator, ... 85

SINGLE HORSE POWER AND CHURNING MACHINE.

This machine has been extensively used in large dairies and with the most satisfactory results. The power is found to be peculiarly adapted to churning, the propelling force being produced by the weight of the horse to an amount sufficient to drive 4 or 5 barrel churns. The motion is varied by altering the elevation of the power so as to produce all the changes in speed required in the different stages of the process of churning. This is done by meant of a lever and without stopping the horse, so that the motion is always under the control of the person in charge. The power is the same as that made by us for threshing, &c.

WHEELER'S FEED CUTTER.

This machine is made expressly for Horse Power use, and is very strong and substantial. It cuts not only corn stalks, but hay and straw with equal facility, and does its work with great rapidity. Price, $28.

LAWRENCE'S SAW-MILL.

This mill is much used on railways, for sawing wood for locomotives, as well as by farmers, for cutting stove fuel. With a one horse power it will cut from 10 to 15 cords of wood twice in two per day. Price, (with 24 inch saw,) $35.

WHEELER'S CLOVER HULLER.

This machine is compact, simple and durable. It does its work perfectly without injuring the seed, and is capable of hulling from 5 to 15 bushels of clover seed per day, with one horse. Price, $28.

TROJAN PLOW.

The subscribers are also the sole agents in Albany for the sale of the celebrated "*Trojan Plow*," made by N. B. Starbuck, of Troy. These plows are doubtless superior to any other kind in use, and will be sold by us at the manufacturer's prices.

☞ All machines made and sold by us are *warranted to give satisfaction*, or they may be returned after a reasonable time for trial. Orders are solicited and will be promptly filled.

WHEELER, MELICK, & CO.,
Corners of Hamilton, Liberty, and Pruyn streets,
(Near the Steamboat Landing,) Albany, N. Y.
August, 1852.

The subscribers have obtained from Messrs. Wheeler, Melick, & Co., of Albany, the exclusive sale in Rochester, and general agency in Western New York, of their celebrated Agricultural Machines, which we will sell at their Albany prices, adding transportation.

J. RAPALJE & CO.

Field Seeds.

AUSTRALIAN WHEAT—very superior. The berry of this grain is extra large, and makes the best of flour. It produces a greater average crop than any other variety now grown in New York. Several years' experience in its cultivation, proves that it is less liable to rust or mildew than other kinds; and as the stalk is large and strong, it is also less liable to blow down or lodge. Price, $4 per bushel. Other varieties of wheat, such as the White Flint, Mediterranean, Black Sea, &c.

BUCKWHEAT, of the best kinds in market.

RUTA BAGA, or Swedish Turnep Seed. The Purple Top and other superior varieties.

TURNEP SEED—Large White Flat, Long White, Red Top Flat, Yellow Aberdeen, Yellow Stone, and other improved kinds for the field or garden. A. B. ALLEN & CO.,
June, 1852.—6-tf. 189 & 191 Water st., New York.

Improved Subsoil Plows.

THE subscribers offer for sale an Improved Subsoil Plow, made under the advisement of Prof. J. J. Mapes, and free from the objections urged against those formerly in use. The wearing parts are so arranged that they may be easily and cheaply renewed, while the amount of force requisite to move them is less than half that required by those previously made.

Price—One Horse Plow, $5; with draft rod, $6. No. , with draft rods, $8.50. No. 2, do., $11.

LONGETT & GRIFFING,
June, 1852.—6-3t. No. 25 Cliff street, New York.

Northern N. Y. Live Stock Insurance Company. Plattsburgh, N. Y. For terms, please apply to agents of the Company.

GREAT SALE OF BLOOD CATTLE.

ON Wednesday, the 18th of August next, I will sell the chief part of my large herd of Blood Cattle—chiefly cows, heifers, and heifer and bull calves—comprising upwards of fifty full-bred Short-Horns.

Also, eight thorough-bred Herefords—a two years old bull, a yearling bull, three cows, and three calves. One of the Hereford cows ("Rarity") was imported from England by Messrs. Corning & Sotham, in 1841. The others, excepting the two years old bull, are her descendents, by bulls of the same stock.

Also, two or three Devon bull calves, got by Mr. Ambrose Stevens' imported bull "Candy," bred by the distinguished Mr. Quartly, of Devonshire, England, and out of cows descended from the herd of the late Earl of Leicester.

The remainder of the cows and calves, forty to fifty in number, are high-bred Short-Horn grades, with a dash of Devon blood in some of them.

The calves of the thorough-bred Short-Horns and grade cows, are mostly got by the imported Short-Horn bull "Duke of Exeter," (10,152,) of the celebrated "Princess tribe," bred by Mr. John Stephenson, of Durham, England, whose herd is excelled by none, if equalled, by any now in England.

All the Short-Horn and grade cows and heifers which come in season, will be bulled, previous to the sale, by "Duke of Exeter."

Many of the cows, both thorough-bred and grade, are descended from the Bates bulls "Duke of Wellington," imported by George Vail, Esq., of Troy, N. Y.; and by "Symmetry," son of "Wellington," out of Mr. Vail's imported Bates cow "Duchess."

This stock has been bred with a strict regard to their milking quality, in which they have been fully *proved*, and are not excelled by any herd of cows in the United States. They are all gentle, with fine silky udders, milk easy, and are animals that will be satisfactory to any one in want of the best breeding and milking stock.

The sale will take place at the residence of Peter Gurbrane, two miles above Albany, on the Troy road, on the homestead farm of Gen. Van Rensselaer, where the cattle will be for a week before the sale.

Catalogues with pedigrees will be prepared by the 15th of June, and sent by mail to all post-paid applicants.

I will also sell at the same time, two pairs of six years old thorough-bred Short-Horn oxen, and two or three pairs of matched steers.

Also, ten or twelve South-Down buck lambs, got by an imported ram, from the unrivalled flock of Jonas Webb, of Babraham, England, and from Ewes descended from the flocks of Mr. Webb, and Mr. Ellman of Sussex.

LEWIS F. ALLEN.
Black Rock, N. Y., May, 1852.—6-3t*

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no further preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Real Estate for Sale.

THE health of the subscriber having failed him, he is induced to offer for sale his Mill property, consisting of a custom Mill, recently put in a good state of repair; a Saw Mill, also recently repaired; two Dwelling Houses; a good Orchard, and about 22 acres of land, including flowage land. Said property is situated in the pleasant town of Yates, Orleans Co., N. Y., in the midst of a wealthy farming community and an excellent wheat growing country.

He has also a farm of 154 acres of first quality land adjoining said Mills, 120 acres improved, good buildings, orchards, and plenty of running water. He will sell said farm with the Mills, if desired.

Inquire of the subscriber, on the premises.

[7-3t] J. C. PARSONS.

Prices of Agricultural Products at the Principal Markets in the United States. — July 21, 1852.

	New York.	Boston.	Rochester.	Chicago.	Cincinnati.	Philadelphia.
Beef, per 100 lbs.....	*a* $7.50	*a* $7.25	$5.50 *a* 6.00			
do mess, per bbl..	15.00 18.00	17.00 18.00	10.00 10.50			$18.00 *a* 19.00
Pork, per 100 lbs....			7.00 7.50			
do mess, per bbl.	18.50 19.50	19.00 22.00	16.00 19.00	$16.50 *a* 17.00	$20.00	19.75 20.00
Lard, per lb.....	10 11½	11½ 12½	9 10	9 9½	8 *a* 10½	10 11¼
Butter, do	12½ 21	15 23	12½ 8 10	9 12		12 14
Cheese, do	6½ 8	7 8½	6 7	5 6	6	
Flour, per bbl.....	4.90 5.87½	4.12 5.75	4.75 5.00	2.75 3.50	3.18 3.35	4.12½ 5.00
Wheat, per bush....	90 1.12	90 1.05	90 1.00		62 64	95 1.03
Corn, shelled, per bu.	62 62½	57 66	54 56	31 35	31 33	64
Rye, do	79½	80 82	69 70		47 50	81 83
Oats, do	40 44½	44 47	40 41	23 24½	24½ 25	43 46
Barley, do	58 62		67 70		25 40	
Clover seed, do	7½*a*8 pr. lb.	8 *a* 11 per lb.	5.50		3.75 4.00	4.87½ 5.00
Timothy seed, do	$1.4 to 16 per tce.	2.50 2.75	2.25 3.00	2.25	1.50 2.50	
Flax seed, do	1.20 1.30	1.33 1.35	1.25 1.50	1.00	1.00	1.25
Hay, per ton.....	16.00 20.00	14.00 15.00	8.00 12.00		6.50 12.00	
Wool, per lb.....	31 48	50	30 40	23 36	26 37	34 50
Wood, hard, per cord		5.00 6.50	4.00 4.50			

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Valuable Virginia Land for Sale.

I OFFER for sale between 700 and 800 acres of land, handsomely located in Prince George county, Va., lying immediately on Chipoaks creek, adjoining Lower Brandon plantation on the south, 25 miles from Petersburg. About 200 acres are cleared, and the balance tolerably well timbered with oak and pine. The cleared land was marled several years ago, and 1000 bushels of marl with 1500 bushels of lime have been recently applied to it.

The improvements are, a good brick house with five rooms, (from which there is a beautiful prospect of James river,) a kitchen, stable, smoke-house, a barn with stationary horse-power attached, and a well of good water. The buildings are within 300 yards of the main landing, where vessels load with produce, wood, &c., and unload lime at 7 cts. per bushel. Marl abounds on the opposite side of the creek. The whole tract is well watered by springs and brooks, that run through fine meadow lands, a part of which are cleared.

I will sell it entire, or in parcels to suit purchasers, as it can be advantageously divided into four farms. If not sold privately (of which due notice will be given) before the 3d day of September next, I will sell it upon the premises, on that day, at public auction, without reserve.

Persons wishing to view the property will leave the Richmond and Norfolk boat at Lower Brandon Wharf, on James River, three miles from the property; or I will give any information to those addressing me (post-paid) at Cabin Point P. O., Surry County, Va.

August, 1852.—3-2t. E. T. FETTER.

Splendid Horses for Sale at Auction.

"We refer those who are critical in the matter of horse-flesh to the advertisement of J. Dorr, Esq., of Scottsville, by which it will be seen that his fine Morgan colts are offered for sale. Such an opportunity to purchase seldom occurs. Both the breed and these individual specimens are among the most desirable in the country."—*Rochester Daily American, July 2, 1852.*

See advertisement on page 232 (July number.) Sale to be August 25, at 3 P. M., in front of J. P. Fogg's seed store, Rochester, instead of 18th, at Scottsville, as before advertised. J. DORR.

Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,

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VOLUME XIII, FOR 1852.

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December, 1851. *Rochester, N. Y.*

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